

Appendix C.

Statistical Methodology

MAIL LIST MODEL

Classification analysis was performed to predict the probability that an addressee on the 1992 mail list operated a farm, and thereby separated the preliminary mail list into probable farm and probable nonfarm classes. The analysis was used to reduce the preliminary census mail list of 3.78 million records to a final mail list size of 3.55 million records. All 3.55 million addresses on the final mail list received a census of agriculture report form.

Records from the 1987 final census mail list were used to build a 1992 prediction model for the 1992 analysis. Classification and Regression Trees (CART) software analyzed characteristics of known 1987 farm and nonfarm operations to determine which were most useful in predicting farm and nonfarm classes. Record characteristics such as the source of the mail list record, number of source lists on which the record appeared, expected value of agricultural sales, and geographic location were used to separate mail list records into model groups. (Sources included the previous agriculture census mail list, the Internal Revenue Service administrative records, U.S. Department of Agriculture, and special commodity lists.) The proportion of 1987 census farm records in each model group was calculated to provide an estimate of the probability that an addressee in the group operated a farm.

After the model groups were defined, each address record on the 1992 preliminary mail list was assigned to a model group by matching record characteristics to model group characteristics. Records belonging to the groups with the highest farm probability were those more likely to be farms according to the classification tree methodology. The model, followed by analyst reviews, was used to remove 229,700 records from the preliminary mail list (those in model groups with the lowest farm probability), and thereby designated the 3.55 million records with the highest farm probability to receive the census report form. This procedure was used to obtain a more complete census enumeration of farm operations without excessive respondent burden and data collection cost.

CENSUS SAMPLE DESIGN

Each of the 3.55 million name and address records on the census mail list was designated to receive one of three different types of census report forms. The three forms were the nonsample form, the screener form, and the

sample form. Sections 1 through 20 and 27 through 32 of the sample form are identical to sections on the nonsample form. The sample form, sections 21 through 26, contains additional questions on usage of fertilizers and chemicals, farm production expenditures, value of machinery and equipment, value of land and buildings, and farm-related income. The screener form is identical to the nonsample form with questions added in section 1 to allow quick identification of nonfarm addresses. These three different forms were used to reduce the response burden of the census, while providing reliable information on a large number of data items.

The sample form was mailed to all mail list records in Alaska, Hawaii, and Rhode Island, and to a sample of records in other States selected from the final mail list. Addresses were selected into the sample with certainty (1) if they were expected to have large total value of agricultural products sold or large acreage, (2) if they were multiunit operations (i.e., separate farms in more than one location), (3) if they had other special characteristics, or (4) if they were in a county with less than 100 farms in 1987. Other addresses in counties containing 100 to 199 farms in 1987 were systematically sampled at a rate of 1 in 2, and other addresses in counties containing 200 farms or more in 1987 were systematically sampled at a rate of 1 in 6. This differential sampling scheme was used to provide reliable data for the sample sections of the report form for all counties. When a nonsample large farm was identified during processing, a supplemental form that contained the additional sample data inquiries was mailed.

To determine which mail list records would receive the screener form, all mail list records not designated for the sample were sorted by model group farm probability as specified by the mail list model. The 412,000 mail list records in the model groups with the lowest probability of being farms and with an expected total value of agricultural product sales less than \$25,000 were designated to receive the screener report form. The remaining mail list records received the nonsample report form.

CENSUS ESTIMATION

The 1992 Census of Agriculture used two types of statistical estimation procedures. These estimation procedures accounted for nonresponse to the data collection and for the sample data collection. These procedures are necessary because some farm operators never respond to

the census despite numerous attempts to contact them, and the estimates for the sample data are based on a sample of farm operators rather than a full enumeration.

Whole Farm Nonresponse Estimation

A statistical estimation procedure was used to account for nonrespondent farm operators to the census. We excluded large and unique farm operations that received intensive telephone followup during census processing, assuming complete response from them. A stratified systematic sample of remaining census nonrespondents were contacted by enumerators using a computer-assisted telephone interview system. Five sample strata were defined based on expected value of sales, previous census status, and whether the record was identified by the mail list model to receive the screener report form. The nonresponse survey telephone interview was designed to provide sufficient information to determine the farm status of each record.

In situations where the nonresponse survey case could not be contacted, the contact person refused to cooperate, or when no phone number could be obtained, a screener report form was sent by certified mail.

Estimates of the proportion of census nonrespondents that operated farms were made for each stratum in the State using survey results and applied to the total number of census nonrespondents in that stratum. The number of census nonrespondents that operated farms for each county by stratum was then derived. This estimation procedure is based on the assumption that the distribution of farms in a stratum by county is the same for census nonrespondents as for census respondents.

Certain census respondent farms which exhibited "rare" commodities were designated as "ineligible" to represent census nonrespondent farms and were excluded from the nonresponse weighting operation. The procedure explained below was performed with only the eligible respondent cases: Within each stratum in a county, a noninteger nonresponse weight was calculated and assigned to each eligible respondent farm record. The noninteger nonresponse weight is the ratio of the sum of the estimated number of nonrespondent farms from the nonresponse survey and the number of eligible census respondent farms to the number of eligible census respondent farms. Stratum controls were established to ensure that this weight was never greater than 2.0. The noninteger nonresponse weight was used in the calculation of the final weight for the sample items. The noninteger nonresponse weight was randomly rounded to an integer weight of either 1 or 2 for each record for tabulating the complete count items for publication.

Table A quantifies the effect of the nonresponse estimation procedure on selected census data items. The percentages in these tables are the percents of the census values contributed by nonresponse estimation. These indicate the potential for bias in published figures resulting from nonresponse to the census. The estimates provided

in these tables do not reflect the effect of item nonresponse to individual census data items. The effect of item nonresponse is discussed in the Census Nonsampling Error section.

Table A. Percent of State Totals Contributed by Whole Farm Nonresponse Estimation: 1992

Item	Percent of total
Farms	13.7
Land in farms.....acres	9.5
Estimated market value of land and buildings ¹\$1,000	4.5
Market value of agricultural products sold ..\$1,000	7.1
Harvested croplandacres	8.8
Corn for grain or seedacres	8.5
Wheat for grainacres	8.2
Livestock and poultry inventory:	
Cattle and calvesnumber	8.5
Hogs and pigsnumber	6.9
Hens and pullets of laying agenumber6

¹Data are based on a sample of farms.

Sample Estimation

Sample data estimates the population totals that would have resulted from a complete census for the items in sections 21 through 26 of the sample report form. The estimates were obtained from a ratio estimation procedure that resulted in the assignment of a weight to each respondent record containing sample items. For any given county, a sample item total was estimated by multiplying the data items for each farm in the county by the corresponding sample weight and summing over all sample records in the county.

Each respondent sample farm was assigned a sample weight for use in producing estimates for all sample items. For example, if the weight given to a sample farm had the value 6, all sample data items reported by that farm would be multiplied by 6. The weight assigned to a sample certainty farm was 1.

Other than certainty farms, within a county, the ratio estimation procedure for farms was performed in three steps using three variables. The first variable contained eight 1992 total value of agricultural production (TVP) groups. Both the second and third variables, Standard Industrial Classification (SIC) code and farm acreage, contained two groups. The three sets of groups were as follows:

TVP	SIC	Acres
\$1 to \$999	01 All crops	1 to 69
\$1,000 to \$2,499	02 All livestock	70 or more
\$2,500 to \$4,999		
\$5,000 to \$9,999		
\$10,000 to \$24,999		
\$25,000 to \$49,999		
\$50,000 to \$99,999		
\$100,000 or more		

The first step in the estimation procedure was to classify the sample records into 32 mutually exclusive initial post strata formed by the three sets of groups. The total and sample farm counts were expanded to account for nonresponse. Each cell containing sample farm records was assigned an initial sample weight equal to the ratio of the total farm count to the sample farm count. This weight was approximately equal to the inverse of the probability of selecting a farm for the census sample.

The second step in the estimation procedure was to combine, if necessary, the 32 initial post strata to increase the reliability of the ratio estimation procedure. Any stratum that contained less than 10 sample farms after nonresponse adjustment or had a weight greater than two times the mail sample rate was collapsed with another stratum. The mail sample rate was either 2 or 6, depending on whether the county had a 1 in 2 or 1 in 6 sample selection rate. The collapsing occurred within the initial 32 post strata according to a specified collapsing pattern. After the collapsing process was completed, new total farm counts and sample farm counts were computed from each of the final post strata and were used to calculate final sample weights.

The final step consisted of assigning the noninteger final post stratum weight to the sample farm records in each post stratum. The weight is the ratio of total farm count to sample farm count in each final post stratum. The noninteger sample weight, the product of the noninteger final post stratum weight and the nonresponse weight, was randomly rounded to an integer weight for tabulation. If, for example, the final weight for the farms in a particular post stratum was 7.2, then 0.2 or one-fifth of the sample farms in this post stratum were randomly assigned a weight of 8 and the remaining four-fifths received a weight of 7.

CENSUS SAMPLING ERROR

The sample for the 1992 Census of Agriculture is only one of a large number of possible samples of the same size that could have been selected using the same sample design. Sample refers to the sample for both the nonresponse survey and the selection of farms to receive the sample report forms. Estimates derived from all the possible samples would differ from each other only by random variation.

The standard error or sampling error of a survey estimate is a measure of the variation among the estimates from all possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The percent relative standard error of an estimate is defined as 100 times the standard error of the estimate divided by the value of the estimate.

If all possible samples were selected, each of the samples were surveyed under essentially the same conditions, and an estimate and its standard error were calculated from each sample, then:

1. Approximately 90 percent of the intervals from 1.65 standard errors below the estimate to 1.65 standard errors above the estimate would include the average value of all possible samples.
2. Approximately 95 percent of the intervals from 1.96 standard errors below the estimate to 1.96 standard errors above the estimate would include the average value of all possible samples.

The following example illustrates the computations necessary for producing a confidence interval for an estimate. Assume that the estimate of number of farms for a State is 94,382 and the relative standard error of the estimate is .1 percent (0.001). Multiplying 94,382 by 0.001 yields 94, the standard error; therefore, a 90-percent confidence interval is 94,227 to 94,537 (i.e., 94,382 plus or minus 1.65 x 94). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 90 percent of these intervals would contain the figure obtained from a complete enumeration. Similarly, a 95-percent confidence interval is 94,198 to 94,566 (i.e., 94,382 plus or minus 1.96 x 94).

Census items were classified as either complete count or sample count items. Complete count items were asked of all farm operators. Examples of complete count items were land in farms, harvested cropland, livestock inventory and sales, crop acreage, quantities harvested and crop sales, land use, irrigation, government loans and payments, conservation acreage, type of organization, and operator characteristics.

Sample count items were asked only of a sample of farm operators. These items appeared only in sections 21 through 26 of the sample report form. Sample count items were included under the following section headings: commercial fertilizers, chemicals, production expenses, farm machinery and equipment, value of land and buildings, and farm-related income.

Variability, measured as percent relative standard error, in the estimates of complete count items is due only to the nonresponse survey estimation procedure. Variability in the estimates of sample count items is due to both the nonresponse survey estimation procedure and the census sample selection and estimation procedure. Thus, variability in the sample count item estimates tends to be larger than the variability in the complete count item estimates.

Table B provides the generalized reliability estimates of the estimated number of farms in a county reporting complete count and sample count items. The top half of the table shows the percent relative standard error for estimated number of farms in a county reporting a complete count item and the bottom half a sample count item. These are derived from regression equations. Separate regression equations were used for complete count items and sample count items. Each regression equation was fit with the estimated number of farms in a county reporting an item as the independent variable and the relative variance of that estimate as the dependent variable for all counties in the State. For sample count items, only data

from counties sampled at a rate of 1 in 6 are used in the estimation of the regression equation.

Table B. Reliability Estimates for Number of Farms in a County Reporting a Complete Count Item or Sample Count Item: 1992

Farms	Relative standard error of estimate (percent)
COMPLETE COUNT ITEM	
Number of farms reporting:	
25	6.0
50	4.2
75	3.4
100	2.9
150	2.3
200	1.9
300	1.5
500	1.0
750	.6
1,000	.3
1,500	.3
2,000	.2
SAMPLE COUNT ITEM	
Number of farms reporting:	
25	20.9
50	16.8
75	15.2
100	14.3
150	13.3
200	12.8
300	12.3
500	11.9
750	11.7
1,000	11.6
1,500	11.5
2,000	11.4

To illustrate the use of this table, assume that the estimate of the number of farms reporting hogs and pigs for a particular county, as given in county table 15, is 89. Since hogs and pigs is a complete count data item, refer to the first part of table B and use the estimated percent relative standard error of the estimate from the row with farm count equal to or just less than the estimated number of farms, 89. For this example, the percent relative standard error of the estimate comes from the row for 75 farms reporting. For sample count items, follow the same procedure using the second part of table B. For counties with fewer than 100 farms in the 1987 Census of Agriculture, variability in sample count item estimates comes only from nonresponse survey estimation procedures; thus, the estimated relative standard error for a sample count item in these counties may be obtained using the first part of table B.

Table C presents the percent relative standard error of selected State data items for all farms, and table D presents the percent relative standard error of selected State data items for all farms with sales of \$10,000 or more.

Table E presents the percent standard error for percent change in State totals from 1987 to 1992. The general

purpose of the percent change estimate is to provide a relative measure of the difference in a characteristic between censuses. The relative change for a given characteristic is defined as the ratio of the difference of the 1992 and the 1987 estimate for that characteristic to the 1987 estimate. This ratio is multiplied by 100 to obtain the percent change. The percent standard error of a percent change estimate, then, is the standard error of the ratio multiplied by 100.

Table F presents the percent relative standard error for State and county totals for selected data items. The percent relative standard error of the estimate for the same item differs among counties in the State. Reasons for this are differences among counties in (1) the total number of farms, (2) the number of large farms included with certainty, (3) the size classifications of the farms sampled, (4) the amount of nonresponse, (5) the general agricultural characteristics, and (6) the specific characteristic being measured.

CENSUS NONSAMPLING ERROR

The accuracy of the census counts are affected jointly by sampling errors, described in the previous section, and nonsampling errors. Extensive efforts were made to compile a complete and accurate mail list for the census, to design an understandable report form with instructions, and to minimize processing errors through the use of quality control measures on specific operations. Nonsampling errors arise from incompleteness of the census mail list, duplication in the mail list, incorrect data reporting, errors in editing of reported data, and errors in imputation for missing data. These specific nonsampling errors are further discussed in this section. Evaluation studies will be conducted to measure the extent of certain nonsampling errors such as coverage error and classification error.

Census Coverage

The main objective of the census of agriculture is to obtain a complete and accurate enumeration of U.S. farms with accurate data on all aspects of the agricultural operation. However, the high cost and availability of resources for enumeration place restrictions on feasible data collection methodologies. The past six agriculture censuses have been conducted by mail enumeration with telephone contact for selected nonrespondents. The completeness of such an enumeration thus depends to a large extent on the coverage of farm operations by the census mail list.

The past five censuses of agriculture have included approximately 91 percent of farms in the United States and approximately 96 percent of agriculture production. Complete enumeration of agricultural operations satisfying the farm definition of \$1,000 or more in agricultural sales is complicated by fluctuations in agricultural operations qualifying for enumeration, the variety of arrangements under which farms are operated, the multiplicity of names used

by an operation, the number of operations in which an operator participates, the accuracy of data reporting, and other factors. A new mail list is compiled for each census because no current single list of agricultural operations is comprehensive.

An evaluation of census coverage has been conducted for each census of agriculture since 1945. The evaluation provides estimates of the completeness of census farm count and major census data items. In addition, the evaluation helps to identify problems in the census enumeration and provide information that can form the basis for improvements. The results of the 1992 Coverage Evaluation program will be published in volume 2, Subject Series (Part 2): Coverage Evaluation.

The evaluation of coverage for the 1992 census was designed to measure four components of error in the census mail list and in farm classification. Mail list error includes two components of error, a measurement of farms not on the census mail list (undercount) and a measurement of farms enumerated more than once in the census (overcount). Classification error includes two components of error, a measurement of farms classified as nonfarms in the census (undercount) and of nonfarms classified as farms in the census (overcount). Classification error arises from reporting and processing errors. Mail list undercount dominates all coverage errors. Net coverage error is defined as the difference between undercounted and overcounted farms. Measurements of these errors, as well as a description of the complete coverage program, will be available in the Coverage Evaluation report.

Mail List Coverage

A major problem with mail enumeration for the census of agriculture is the difficulty encountered in compiling a complete mail list. The percentage of farms included on the census mail list varies considerably by State. Several reasons have contributed to farm operator names not being included on the census mail list—the operation may have been started after the mail list was developed, the operation may be so small as not to appear in any of the agriculture-related source lists used in compiling the census list, or the operation may have been falsely classified as a nonfarm prior to mailout. A large proportion of the farms not included on the mail list are small in both acres and sales of agricultural products.

The 1992 Census of Agriculture Coverage Evaluation used the area segment sample of the 1992 June Agricultural Survey (JAS) of the National Agricultural Statistical Service (NASS) to estimate farms not on the census mail list. The Census Bureau contracted with NASS to augment the JAS data collection. The survey data collected by NASS will be protected under the confidentiality of title 13, U.S. Code. These JAS survey records were matched to the census mail list. Records that did not match were mailed a census of agriculture report form to estimate mail list

coverage. Estimates of farms not on the census mail list are computed using a capture-recapture dual frame estimator which will be described in the Coverage Evaluation report mentioned earlier.

Table G provides coverage evaluation estimates for one component of coverage error associated with the census of agriculture; that is, the error due to farms not on the census mail list. Also provided are estimates of selected characteristics of farms not on the mail list, estimates of characteristics of farms not on the mail list as a percentage of total farms in the State, and the percent relative standard error associated with each estimate. The estimate of total farms in the State is based on census farm count plus the estimated number of farms not on the census mail list. This estimate of total farms in the State was not adjusted for the components of error associated with classification and list duplication error. Estimates of these errors will be made at the regional, rather than the State level, and will be provided in the Coverage Evaluation report mentioned earlier.

Respondent and Enumerator Error

Incorrect or incomplete responses to the mailed census report form or to the questions posed by a telephone enumerator introduce error into the census data. Such incorrect information can lead, in some cases, to incorrect classification of farms. This type of reporting error is measured by the Classification Error Survey discussed later in this section. To reduce all types of reporting error, detailed instructions for completing the report form were provided to each addressee. Questions were phrased as clearly as possible based on tests of the census report form and each respondent's answers were checked for completeness and consistency.

Item Nonresponse

As information flows from data collection to tabulation, various types of item nonresponses are identified on the report forms. Nonresponse to particular questions on the report form that logically should be present may create a type of nonsampling error in both complete count and sample count data. When information from reporting farms is used to edit or impute for item nonresponse, the data may be biased due to characteristics of the nonreporting respondents differing from those reporting the item. Any attempt to correct the data items may not completely reflect this difference either at the element level (individual farm operation) or on the average.

Processing Error

All phases of processing for each report form are sources for the introduction of nonsampling error. The processing of the report forms includes clerical screening for farm activity, computerized check-in of report forms and follow-up of nonrespondents, keying and transmittal of

completed report forms, computerized editing of inconsistent and missing data, review and correction of individual records referred from the computer edit, review and correction of tabulated data, and electronic data processing. These operations undergo a number of quality control checks to ensure as accurate an application as possible, yet some errors are not detected and corrected.

Classification Error

An evaluation study of classification errors was conducted in the 1992 Census of Agriculture as part of the census coverage evaluation program. A sample of census mail list respondents was selected, and these addresses were reenumerated to determine whether they were a farm or nonfarm. A farm status determination was made based on the evaluation report form and compared with the census farm status which was based on the data reported on the report form. Differences in status were reconciled.

In past censuses, the proportion of farms undercounted due to classification errors was higher for farms with small values of sales. For the 1987 census, the classification error rate was higher for (1) farms with small values of sales, (2) farms with a small number of acres, (3) full-owner farms than part-owner or tenant farms, (4) operators with principal occupation other than farming, and (5) males than females. Results from the 1992 Classification Error Survey will be published in the Coverage Evaluation report.

EDITING DATA AND IMPUTATION FOR ITEM NONRESPONSE

The Census of Agriculture Complex Edit and Imputation System performs the following functions:

- Ensuring reasonable relationships between/among data items, values for various sizes of farms, and combinations of commodities.
- Ensuring necessary consistencies are present. There are more than 70 distinct consistency requirements.
- Ensuring geographic, legal, and physical constraints are met.

The system must perform these and similar functions for 900 data keycodes for sample records and 850 data keycodes for nonsample records.

For the 1992 Census of Agriculture, as in previous censuses, all reported data were keyed and then edited by computer. The edits were used to determine whether the reports met the minimum criteria to be counted as farms in the census. The complex edit and imputation system provided the basis for deciding to accept, impute (supply), delete, or alter the reported value for each data record item.

Whenever possible, edit imputations, deletions, and changes were based on component or related data on the respondent's report form. For some items, such as operator characteristics, data from the previous census were used when available. Values for other missing or unacceptable reported data items were calculated based on reported quantities and known price parameters.

When these and similar methods were not available and values had to be supplied, the imputation process used information reported for another farm operation in a geographically adjacent area with characteristics similar to those of the farm operation with incomplete data. For example, a farm operation that reported acres of corn harvested, but did not report quantity of corn harvested, was assigned the same bushels of corn per acre harvested as that of the last nearby farm with similar characteristics that reported acceptable yields during that particular execution of the computer edit. The imputation for missing items in each section of the report form was conducted separately; thus, assigned values for one operation could come from more than one respondent.

Prior to the imputation operation, a set of default values and relationships were assigned to the possible imputation variables. The relationships and values varied depending on the item being imputed. For example, different default values were assigned for several standard industrial classification and total value of sales categories when imputing hired farm labor expenses. These values and item relationships for the possible imputation variables were stored in the computer in a series of matrices.

Each execution of the computer edit consisted of records from only one State. The computer records were sorted by reported State and county. For a given execution of the edit, the stored entries in the various matrices were retained in memory only until a succeeding record having acceptable characteristics for some sections of the report form was processed by the computer. Then the acceptable responses of the succeeding operation replaced those previously stored. When a record processed through the edit had unreported or unacceptable data, the record was assigned the last acceptable ratio or response from an operation with a similar set of characteristics. Once each execution of the computer edit for a State was completed, the possible imputation variables were reset to the default values and relationships for subsequent executions.

After the initial computer edit, keyed reports not meeting the census farm definition were reviewed to ensure that the data were keyed correctly. Edit referrals were generated for about 25 percent of the reports included as farms; they were reviewed for keying accuracy to ensure that the computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record was reedited.

Table C. Reliability Estimates of State Totals for All Farms: 1992

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)	
F FARMS AND LAND IN FARMS						
Farms ----- number	96 543	1.1				
Land in farms ----- acres	31 346 565	.9				
Average size of farm ----- acres	325	1.4				
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD						
Total sales (see text) ----- farms	96 543	1.1				
\$1,000-----	10 099 786	.6				
Average per farm ----- dollars	104 614	1.3				
Farms by value of sales:						
Less than \$1,000 (see text) ----- farms	3 463	1.4				
\$1,000-----	989	1.7				
\$1,000 to \$2,499 ----- farms	4 173	1.5				
\$1,000-----	7 047	1.5				
\$2,500 to \$4,999 ----- farms	4 753	1.4				
\$1,000-----	17 385	1.4				
\$5,000 to \$9,999 ----- farms	7 030	1.3				
\$1,000-----	51 291	1.3				
\$10,000 to \$19,999 ----- farms	9 888	1.3				
\$1,000-----	145 328	1.3				
\$20,000 to \$24,999 ----- farms	3 932	1.4				
\$1,000-----	87 705	1.4				
\$25,000 to \$39,999 ----- farms	9 750	1.4				
\$1,000-----	312 715	1.4				
\$40,000 to \$49,999 ----- farms	5 102	1.5				
\$1,000-----	227 831	1.5				
\$50,000 to \$99,999 ----- farms	17 570	1.4				
\$1,000-----	1 272 811	1.4				
\$100,000 to \$249,999 ----- farms	21 903	1.1				
\$1,000-----	3 443 180	1.1				
\$250,000 to \$499,999 ----- farms	6 692	—				
\$1,000-----	2 257 459	—				
\$500,000 or more ----- farms	2 287	—				
\$1,000-----	2 276 044	—				
Sales by commodity or commodity group:						
Crops, including nursery and greenhouse crops ----- farms	75 351	1.1				
\$1,000-----	4 641 155	.8				
Grains ----- farms	71 187	1.1				
\$1,000-----	4 489 827	.8				
Corn for grain ----- farms	63 885	1.1				
Wheat ----- farms	2 687 476	.8				
Soybeans ----- farms	3 322	1.3				
Sorghum for grain ----- farms	59 854	1.1				
Barley ----- farms	1 780 675	.8				
Oats ----- farms	57	3.7				
Other grains ----- farms	424	5.1				
Cotton and cottonseed ----- farms	80	3.0				
Tobacco ----- farms	135	3.3				
Hay, silage, and field seeds ----- farms	8 437	1.1				
Vegetables, sweet corn, and melons ----- farms	13 396	1.1				
Fruits, nuts, and berries ----- farms	399	1.6				
Nursery and greenhouse crops ----- farms	4 399	1.8				
Livestock, poultry, and their products ----- farms	905	1.3				
\$1,000-----	9 509	2.0				
Poultry and poultry products ----- farms	346	2.0				
\$1,000-----	3 499	2.7				
Dairy products ----- farms	518	1.7				
\$1,000-----	57 854	.6				
Other crops ----- farms	108	2.9				
\$1,000-----	1 508	2.0				
Hogs and pigs ----- farms	64 668	1.1				
\$1,000-----	5 458 631	.5				
Cattle and calves ----- farms	2 056	1.1				
\$1,000-----	244 160	.2				
Sheep, lambs, and wool ----- farms	5 544	1.3				
\$1,000-----	421 556	1.0				
Other livestock and livestock products (see text) ----- farms	43 780	1.1				
\$1,000-----	2 235 422	.5				
Hogs and pigs ----- farms	34 058	1.0				
\$1,000-----	2 502 048	.6				
Sheep, lambs, and wool ----- farms	7 141	1.1				
\$1,000-----	38 861	.8				
Value of agricultural products sold directly to individuals for human consumption (see text) ----- farms	2 992	1.2				
\$1,000-----	16 584	1.6				
FARM PRODUCTION EXPENSES¹						
Total farm production expenses ----- farms	96 532	1.1				
\$1,000-----	7 744 947	.7				
Average per farm ----- dollars	80 232	1.3				
Livestock and poultry purchased ----- farms	41 068	1.3				
\$1,000-----	1 490 792	.7				
Feed for livestock and poultry ----- farms	58 661	1.2				
\$1,000-----	1 317 636	.7				
Commercially mixed formula feeds ----- farms	27 260	1.5				
\$1,000-----	540 402	1.0				
Seeds, bulbs, plants, and trees ----- farms	78 194	1.1				
\$1,000-----	386 488	.9				
Commercial fertilizer ----- farms	74 421	1.2				
\$1,000-----	578 142	1.0				
Agricultural chemicals ----- farms	77 540	1.1				
\$1,000-----	424 136	1.0				
Petroleum products ----- farms	92 977	1.1				
\$1,000-----	379 607	.9				
Electricity ----- farms	81 860	1.1				
\$1,000-----	133 955	.9				
Hired farm labor ----- farms	36 520	1.3				
\$1,000-----	259 210	.9				
Contract labor ----- farms	7 275	2.7				
\$1,000-----	19 833	3.3				
Repair and maintenance ----- farms	86 413	1.1				
\$1,000-----	485 479	1.0				
Customwork, machine hire, and rental of machinery and equipment ----- farms	48 890	1.3				
\$1,000-----	141 975	1.8				
Interest expense ----- farms	61 909	1.2				
\$1,000-----	593 994	1.0				
Secured by real estate ----- farms	41 104	1.3				
\$1,000-----	357 920	1.2				
Not secured by real estate ----- farms	41 501	1.3				
\$1,000-----	236 074	1.1				
Cash rent ----- farms	38 795	1.3				
\$1,000-----	677 490	1.1				
Property taxes ----- farms	81 786	1.1				
\$1,000-----	240 832	1.1				
All other farm production expenses ----- farms	93 438	1.1				
\$1,000-----	615 377	.9				
NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)¹						
All farms ----- number	96 541	1.1				
\$1,000-----	2 193 209	1.0				
Average per farm ----- dollars	22 718	1.5				
Farms with net gains ² ----- number	66 215	1.2				
\$1,000-----	2 477 696	.9				
Average net gain ----- dollars	37 419	1.5				
Farms with net losses ----- number	30 326	1.5				
\$1,000-----	284 487	1.8				
Average net loss ----- dollars	9 381	2.4				
GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME						
Government payments ----- farms	61 681	1.1				
\$1,000-----	477 958	.8				
Other farm-related income ¹ ----- farms	34 193	1.5				
\$1,000-----	194 941	2.5				
Customwork and other agricultural services ----- farms	13 093	2.1				
\$1,000-----	85 141	3.5				
Gross cash rent or share payments ----- farms	9 853	2.5				
\$1,000-----	86 052	3.9				
Forest products and Christmas trees ----- farms	630	8.9				
\$1,000-----	2 644	11.3				
Other farm-related income sources ----- farms	18 831	1.8				
\$1,000-----	21 104	3.0				
COMMODITY CREDIT CORPORATION LOANS						
Total ----- farms	17 632	1.0				

Table C. Reliability Estimates of State Totals for All Farms: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE					
Total cropland	farms--	88 224	All operators	farms--	96 543
	acres--	27 195 676		acres--	31 346 565
Harvested cropland	farms--	84 009	Full owners	farms--	43 541
	acres--	22 826 308		acres--	7 480 004
Farms by acres harvested:			Part owners	farms--	34 720
1 to 9 acres	farms--	4 623		acres--	18 208 604
	acres--	22 779	Tenants	farms--	18 282
10 to 19 acres	farms--	3 894		acres--	5 657 957
	acres--	52 697			
20 to 29 acres	farms--	2 817	TENURE OF OPERATOR		
	acres--	66 251	All operators	farms--	96 543
30 to 49 acres	farms--	4 866		acres--	31 346 565
	acres--	185 026	Full owners	farms--	43 541
50 to 99 acres	farms--	10 614		acres--	7 480 004
	acres--	770 697	Part owners	farms--	34 720
100 to 199 acres	farms--	17 867		acres--	18 208 604
	acres--	2 580 998	Tenants	farms--	18 282
200 to 499 acres	farms--	25 995		acres--	5 657 957
	acres--	8 333 225	OWNED AND RENTED LAND		
500 to 999 acres	farms--	10 736	Land owned	farms--	79 231
	acres--	7 222 728		acres--	16 818 204
1,000 acres or more	farms--	2 597	Owned land in farms	farms--	78 261
	acres--	3 591 907		acres--	14 779 726
Cropland:			Land rented or leased from others	farms--	53 273
Pasture or grazing only	farms--	33 040		acres--	16 727 140
	acres--	2 193 779	Rented or leased land in farms	landlords--	122 155
Other cropland	farms--	48 671		farms--	53 003
	acres--	2 175 589		acres--	16 566 839
Total woodland	farms--	22 930	Land rented or leased to others	farms--	14 432
	acres--	1 259 154		acres--	2 198 779
Pastureland and rangeland other than cropland and woodland pastured	farms--	20 629	OPERATOR CHARACTERISTICS		
	acres--	1 463 351	Operators by place of residence:		
Land in house lots, ponds, roads, wasteland, etc.	farms--	67 829	On farm operated		72 150
	acres--	1 428 384	Not on farm operated		19 053
Irrigated land	farms--	1 063	Not reported		5 340
	acres--	115 724			
Acres irrigated:			Operators by principal occupation:		
1 to 9 acres	farms--	455	Farming		66 885
	acres--	1 033	Other		29 658
10 to 49 acres	farms--	163			
	acres--	3 991	Operators by days worked off farm:		
50 to 99 acres	farms--	117	Any		42 672
	acres--	8 150	200 days or more		25 568
100 to 199 acres	farms--	139			
	acres--	19 267	Operators by sex:		
200 to 499 acres	farms--	140	Male	farms--	92 730
	acres--	43 502		acres--	30 621 616
500 to 999 acres	farms--	40	Female	farms--	3 813
	acres--	26 794		acres--	724 949
1,000 acres or more	farms--	9	Average age of operator	years--	50.3
	acres--	12 987			1.5
Harvested cropland irrigated	farms--	1 034			
	acres--	114 911	Individual or family (sole proprietorship)	farms--	81 127
Pasture and other land irrigated	farms--	48		acres--	24 332 657
	acres--	813	Partnership	farms--	10 028
Land under federal acreage reduction programs:				acres--	3 747 014
Diverted under annual commodity programs	farms--	49 049	Corporation:		
	acres--	625 654	Family held	farms--	4 552
Conservation Reserve or Wetlands Reserve Programs	farms--	17 703		acres--	3 000 013
	acres--	1 294 635	More than 10 stockholders	farms--	95
			10 or less stockholders	farms--	4 457
VALUE OF LAND AND BUILDINGS¹					
Estimated market value of land and buildings	farms--	96 541	Other than family held	farms--	372
\$1,000--		1.1		acres--	136 287
Average per farm	dollars--	38 062 933	More than 10 stockholders	farms--	41
Average per acre	dollars--	394 267	10 or less stockholders	farms--	331
		1.4			
		1.3	Other—cooperative, estate or trust, institutional, etc.	farms--	464
				acres--	130 594
VALUE OF MACHINERY AND EQUIPMENT¹					
Estimated market value of all machinery and equipment	farms--	96 386	HIRED FARM LABOR		
\$1,000--		1.1	Hired workers by days worked:		
Average per farm	dollars--	6 647 461	150 days or more	farms--	13 795
Average per acre	dollars--	68 967		workers--	21 779
		1.0	Less than 150 days	farms--	32 905
		1.5		workers--	85 399
AGRICULTURAL CHEMICALS¹					
Commercial fertilizer	farms--	74 271	INJURIES AND DEATHS		
acres on which used--		14 775 107	Farm-related injuries:		
			Operator and family members	farms--	1 195
				number--	1 351
			Hired workers	farms--	401
				number--	553
			Farm-related deaths:		
			Operator and family members	farms--	35
				number--	35
			Hired workers	farms--	4
				number--	4

See footnotes at end of table.

C-8 APPENDIX C

1992 CENSUS OF AGRICULTURE

Table C. Reliability Estimates of State Totals for All Farms: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)		
F FARMS BY SIZE							
1 to 9 acres ----- farms --	7 129	1.2	Cattle and calves sold ----- farms --	43 780	1.1		
acres--	23 915	1.3	number--	3 223 645	.6		
10 to 49 acres ----- farms --	10 345	1.2	\$1,000--	2 235 422	.5		
acres--	267 348	1.2	Hogs and pigs inventory ----- farms --	31 790	1.0		
50 to 69 acres ----- farms --	2 780	1.3	number--	14 153 158	.6		
acres--	162 329	1.3	Hogs and pigs sold ----- farms --	34 058	1.0		
70 to 99 acres ----- farms --	6 228	1.3	number--	26 812 736	.6		
acres--	505 893	1.3	\$1,000--	2 502 048	.6		
100 to 139 acres ----- farms --	6 677	1.3	Sheep and lambs of all ages inventory ----- farms --	6 760	1.1		
acres--	782 888	1.3	number--	405 354	1.0		
140 to 179 acres ----- farms --	8 833	1.4	Sheep and lambs sold ----- farms --	7 043	1.1		
acres--	1 394 907	1.4	number--	592 575	.8		
180 to 219 acres ----- farms --	5 708	1.4	Horses and ponies inventory ----- farms --	8 961	1.1		
acres--	1 128 208	1.4	number--	47 681	1.2		
220 to 259 acres ----- farms --	6 112	1.4	Horses and ponies sold ----- farms --	2 096	1.2		
acres--	1 451 881	1.4	number--	9 457	2.1		
260 to 499 acres ----- farms --	22 168	1.3	POULTRY				
acres--	8 083 381	1.3	Chickens 3 months old or older inventory ----- farms --	2 633	1.2		
500 to 999 acres ----- farms --	15 830	1.0	number--	12 560 235	.2		
acres--	10 770 679	.9	Hens and pullets of laying age ----- farms --	2 590	1.2		
1,000 to 1,999 acres ----- farms --	4 241	—	number--	11 162 662	.2		
acres--	5 418 105	—	Broilers and other meat-type chickens sold ----- farms --	652	1.5		
2,000 acres or more ----- farms --	492	—	number--	9 199 943	.3		
acres--	1 357 031	—	CROPS HARVESTED				
F FARMS BY STANDARD INDUSTRIAL CLASSIFICATION							
Cash grains (011) ----- farms --	46 658	1.1	Corn for grain or seed ----- farms --	72 756	1.1		
acres--	19 018 987	.9	acres--	12 512 815	.8		
Field crops, except cash grains (013) ----- farms --	2 368	1.4	bushels--	1 754 149 889	.8		
acres--	291 344	1.5	Corn for silage or green chop ----- farms --	9 575	1.0		
Vegetables and melons (016) ----- farms --	287	2.2	acres--	260 770	.8		
acres--	15 100	3.3	tons, green--	4 096 921	.7		
Fruits and tree nuts (017) ----- farms --	215	2.5	Wheat for grain ----- farms --	970	1.4		
acres--	9 362	2.9	acres--	30 072	1.4		
Horticultural specialties (018) ----- farms --	390	1.9	bushels--	1 183 472	1.4		
acres--	13 923	2.2	Oats for grain ----- farms --	17 854	1.1		
General farms, primarily crop (019) ----- farms --	1 092	1.5	acres--	368 086	1.0		
acres--	263 076	1.5	bushels--	23 246 559	1.0		
Livestock, except dairy, poultry, and animal specialties (021) ----- farms --	38 761	1.1	Soybeans for beans ----- farms --	59 945	1.1		
acres--	10 231 439	.8	acres--	8 243 067	.8		
Dairy farms (024) ----- farms --	3 531	1.3	bushels--	352 590 997	.8		
acres--	919 160	1.2	Irish potatoes ----- farms --	136	2.8		
Poultry and eggs (025) ----- farms --	483	1.3	acres--	1 653	1.6		
acres--	73 233	.9	cwt--	328 097	1.9		
Animal specialties (027) ----- farms --	1 422	1.5	L LIVESTOCK				
acres--	71 865	2.0	Cattle and calves inventory ----- farms --	44 768	1.1		
General farms, primarily livestock and animal specialties (029) ----- farms --	1 336	1.5	acres--	1 762 425	1.1		
acres--	439 076	1.3	tons, dry--	5 107 237	1.1		
L LIVESTOCK							
Cattle and calves inventory ----- farms --	43 610	1.1	Alfalfa hay ----- farms --	40 321	1.1		
number--	3 963 602	.8	acres--	1 367 935	1.1		
Beef cows ----- farms --	29 987	1.2	tons, dry--	4 315 698	1.1		
number--	1 065 744	1.1	Vegetables harvested for sale (see text) ----- farms --	905	1.3		
Milk cows ----- farms --	5 878	1.3	acres--	14 849	1.5		
number--	258 925	1.0	Land in orchards ----- farms --	481	1.8		
			acres--	2 784	2.3		

¹Data are based on a sample of farms.

²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains of less than \$1,000.

**Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More:
1992**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
F FARMS AND LAND IN FARMS					
Farms ----- number	77 124	1.1	Total farm production expenses ----- farms	77 122	1.1
Land in farms ----- acres	29 902 195	.9	\$1,000-----\$1,000	7 621 529	.7
Average size of farm ----- acres	388	1.4	Average per farm ----- dollars	98 824	1.3
M MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD					
Total sales (see text) ----- farms	77 124	1.1	Livestock and poultry purchased ----- farms	35 896	1.3
Average per farm ----- \$1,000	10 023 073	.6	\$1,000-----\$1,000	1 480 736	.7
Average per farm ----- dollars	129 960	1.3	Feed for livestock and poultry ----- farms	49 222	1.3
Farms by value of sales:			Commercial mixed formula feeds ----- farms	23 700	1.6
\$10,000 to \$19,999 ----- farms	9 888	1.3	\$1,000-----\$1,000	537 323	1.0
\$1,000-----\$1,000	145 328	1.3	Seeds, bulbs, plants, and trees ----- farms	69 773	1.2
\$20,000 to \$24,999 ----- farms	3 932	1.4	\$1,000-----\$1,000	382 423	.9
\$1,000-----\$1,000	87 705	1.4	Commercial fertilizer ----- farms	67 009	1.2
\$25,000 to \$39,999 ----- farms	9 750	1.4	\$1,000-----\$1,000	572 115	1.0
\$1,000-----\$1,000	312 715	1.4	Agricultural chemicals ----- farms	67 690	1.2
\$40,000 to \$49,999 ----- farms	5 102	1.5	\$1,000-----\$1,000	419 486	1.0
\$1,000-----\$1,000	227 831	1.5	Petroleum products ----- farms	75 801	1.2
\$50,000 to \$99,999 ----- farms	17 570	1.4	\$1,000-----\$1,000	370 628	.9
\$1,000-----\$1,000	1 272 811	1.4	Electricity ----- farms	69 438	1.2
\$100,000 to \$249,999 ----- farms	21 903	1.1	\$1,000-----\$1,000	128 967	.9
\$1,000-----\$1,000	3 443 180	1.1	Hired farm labor ----- farms	33 232	1.4
\$250,000 to \$499,999 ----- farms	6 692	1.1	\$1,000-----\$1,000	257 713	.9
\$1,000-----\$1,000	2 257 459	—	Contract labor ----- farms	6 461	2.8
\$500,000 or more ----- farms	2 287	—	\$1,000-----\$1,000	19 302	3.3
\$1,000-----\$1,000	2 276 044	—	Repair and maintenance ----- farms	72 112	1.2
Sales by commodity or commodity group:			\$1,000-----\$1,000	469 725	1.0
Crops, including nursery and greenhouse crops ----- farms	66 082	1.1	Customwork, machine hire, and rental of machinery and equipment ----- farms	42 823	1.4
\$1,000-----\$1,000	4 608 067	.8	\$1,000-----\$1,000	138 252	1.8
Grains ----- farms	64 559	1.1	Interest expense ----- farms	54 580	1.2
\$1,000-----\$1,000	4 464 323	.8	\$1,000-----\$1,000	577 542	1.0
Corn for grain ----- farms	59 020	1.1	Secured by real estate ----- farms	35 575	1.4
\$1,000-----\$1,000	2 671 907	.8	\$1,000-----\$1,000	343 979	1.2
Wheat ----- farms	862	1.5	Not secured by real estate ----- farms	38 172	1.4
\$1,000-----\$1,000	3 253	1.4	\$1,000-----\$1,000	233 563	1.1
Soybeans ----- farms	56 610	1.1	Cash rent ----- farms	36 829	1.3
\$1,000-----\$1,000	1 771 261	.8	\$1,000-----\$1,000	674 580	1.1
Sorghum for grain ----- farms	54	3.8	Property taxes ----- farms	64 324	1.2
\$1,000-----\$1,000	419	5.1	All other farm production expenses ----- farms	221 832	1.1
Barley ----- farms	76	3.1	\$1,000-----\$1,000	77 122	1.1
\$1,000-----\$1,000	133	3.3	Interest expense ----- farms	602 596	.9
Oats ----- farms	7 995	1.2	Farms with net gains ² ----- number	60 315	1.2
\$1,000-----\$1,000	13 022	1.1	\$1,000-----\$1,000	2 465 172	.9
Other grains ----- farms	366	1.6	Average net gain ----- dollars	40 872	1.5
\$1,000-----\$1,000	4 327	1.8	Farms with net losses ----- number	16 807	2.0
Cotton and cottonseed ----- farms	—	—	\$1,000-----\$1,000	227 043	2.1
Tobacco ----- farms	—	—	Average net loss ----- dollars	13 509	2.9
Hay, silage, and field seeds ----- farms	13 293	1.2	GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME		
\$1,000-----\$1,000	72 823	1.1			
Vegetables, sweet corn, and melons ----- farms	583	1.4	Government payments ----- farms	55 191	1.1
\$1,000-----\$1,000	8 873	1.4	\$1,000-----\$1,000	445 575	.8
Fruits, nuts, and berries ----- farms	165	2.5	Other farm-related income ¹ ----- farms	29 722	1.5
\$1,000-----\$1,000	3 206	2.9	\$1,000-----\$1,000	175 079	2.6
Nursery and greenhouse crops ----- farms	368	1.9	Customwork and other agricultural services ----- farms	12 220	2.1
\$1,000-----\$1,000	57 360	.6	\$1,000-----\$1,000	83 279	3.6
Other crops ----- farms	80	3.3	Gross cash rent or share payments ----- farms	7 012	2.9
\$1,000-----\$1,000	1 482	2.0	\$1,000-----\$1,000	68 960	4.4
Livestock, poultry, and their products ----- farms	53 372	1.1	Forest products and Christmas trees ----- farms	430	10.8
\$1,000-----\$1,000	5 415 006	.5	\$1,000-----\$1,000	2 195	12.5
Poultry and poultry products ----- farms	1 499	1.2	Other farm-related income sources ----- farms	17 570	1.8
\$1,000-----\$1,000	243 768	.2	\$1,000-----\$1,000	20 644	3.0
Dairy products ----- farms	5 480	1.3			
\$1,000-----\$1,000	421 310	1.0			
Cattle and calves ----- farms	36 841	1.2			
\$1,000-----\$1,000	2 207 758	.5			
Hogs and pigs ----- farms	31 589	1.0			
\$1,000-----\$1,000	2 493 020	.6			
Sheep, lambs, and wool ----- farms	4 830	1.3			
\$1,000-----\$1,000	35 208	.8			
Other livestock and livestock products (see text) ----- farms	1 570	1.4			
\$1,000-----\$1,000	13 942	1.9			
Value of agricultural products sold directly to individuals for human consumption (see text) ----- farms	1 505	1.3	COMMODITY CREDIT CORPORATION LOANS		
\$1,000-----\$1,000	4 496	1.5	Total ----- farms	17 439	1.0
			\$1,000-----\$1,000	573 654	.7

See footnotes at end of table.

C-10 APPENDIX C

1992 CENSUS OF AGRICULTURE

**Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More:
1992—Con.**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)	
LAND IN FARMS ACCORDING TO USE						
Total cropland	farms-- acres--	72 819 26 335 449	1.1 .8	Individual or family (sole proprietorship) farms-- acres--	63 512 23 061 927	1.2 1.0
Harvested cropland	farms-- acres--	71 371 22 521 704	1.1 .8	Partnership-- farms-- acres--	8 646 3 634 158	1.2 .8
Cropland:				Corporation:		
Pasture or grazing only	farms-- acres--	27 178 1 963 422	1.2 1.1	Family held farms-- acres--	4 345 2 971 767	.8 .5
Total woodland	farms-- acres--	17 112 1 027 758	1.2 1.1	More than 10 stockholders farms-- 10 or less stockholders farms--	.86 4 259	3.1 .8
Pastureland and rangeland other than cropland and woodland pastured	farms-- acres--	15 491 1 249 944	1.2 1.0	Other than family held farms-- acres--	305 124 440	1.5 1.2
Land in house lots, ponds, roads, wasteland, etc.	farms-- acres--	54 647 1 289 044	1.1 .9	More than 10 stockholders farms-- 10 or less stockholders farms--	31 274	3.7 1.6
Irrigated land	farms-- acres--	859 114 653	1.2 .9	Other—cooperative, estate or trust, institutional, etc. farms-- acres--	316 109 903	2.0 1.7
Harvested cropland irrigated	farms-- acres--	845 114 001	1.2 .9			
Pasture and other land irrigated	farms-- acres--	30 652	4.4 2.7			
Land under federal acreage reduction programs:						
Diverted under annual commodity programs	farms-- acres--	47 690 622 591	1.1 .8	Hired workers by days worked:		
Conservation Reserve or Wetlands Reserve Programs	farms-- acres--	13 352 950 253	1.1 1.0	150 days or more farms-- workers--	12 648 20 601	39.5 29.3
VALUE OF LAND AND BUILDINGS¹						
Estimated market value of land and buildings	farms-- \$1,000--	77 122 36 344 501	1.1 .9	Less than 150 days farms-- workers--	29 660 79 190	50.9 46.3
Average per farm	dollars--	471 260	1.5			
Average per acre	dollars--	1 212	1.3			
VALUE OF MACHINERY AND EQUIPMENT¹						
Estimated market value of all machinery and equipment	farms-- \$1,000--	77 103 6 259 912	1.1 1.0	Farm-related injuries:		
Average per farm	dollars--	81 189	1.5	Operator and family members farms-- number--	1 091 1 237	1.3 1.3
AGRICULTURAL CHEMICALS¹						
Commercial fertilizer	farms-- acres on which used--	66 970 14 607 592	1.2 .9	Hired workers farms-- number--	397 548	.9 .7
TENURE OF OPERATOR						
All operators	farms-- acres--	77 124 29 902 195	1.1 .9	Farm-related deaths:		
Full owners	farms-- acres--	27 907 6 324 511	1.2 1.1	Operator and family members farms-- number--	32 (D)	4.9 (D)
Part owners	farms-- acres--	32 859 18 020 871	1.0 .7	Hired workers farms-- number--	4 (D)	— (D)
Tenants	farms-- acres--	16 358 5 556 813	1.3 1.1			
OWNED AND RENTED LAND						
Land owned	farms-- acres--	61 633 15 086 724	1.1 1.0	F FARMS BY SIZE		
Owned land in farms	farms-- acres--	60 766 13 521 041	1.1 .9	1 to 9 acres farms-- 10 to 49 acres farms-- 50 to 69 acres farms-- 70 to 99 acres farms-- 100 to 139 acres farms-- 140 to 179 acres farms-- 180 to 219 acres farms-- 220 to 259 acres farms-- 260 to 499 acres farms-- 500 to 999 acres farms-- 1,000 to 1,999 acres farms-- 2,000 acres or more farms--	3 560 2 867 1 331 4 081 5 070 7 668 5 099 5 654 21 402 15 679 4 222 491	1.3 1.3 1.5 1.3 1.4 1.4 1.4 1.4 1.3 1.0 — —
Land rented or leased from others	farms-- acres-- landlords--	49 411 16 523 482 116 735	1.1 .8 .9			
Rented or leased land in farms	farms-- acres--	49 218 16 381 154	1.1 .8	F FARMS BY STANDARD INDUSTRIAL CLASSIFICATION		
Land rented or leased to others	farms-- acres--	9 959 1 708 011	1.2 1.2	Cash grains (011) farms-- Field crops, except cash grains (013) farms-- Vegetables and melons (016) farms-- Fruits and tree nuts (017) farms-- Horticultural specialties (018) farms-- General farms, primarily crop (019) farms-- Livestock, except dairy, poultry, and animal specialties (021) farms-- Dairy farms (024) farms-- Poultry and eggs (025) farms-- Animal specialties (027) farms-- General farms, primarily livestock and animal specialties (029) farms--	41 322 483 91 48 279 609 29 465 3 490 336 198 803	1.2 2.0 3.3 4.1 2.1 1.8 1.1 1.3 1.1 2.5 1.5
OPERATOR CHARACTERISTICS						
Operators by place of residence:						
On farm operated		58 689	1.1	LIVESTOCK		
Not on farm operated		14 494	1.3	Cattle and calves inventory farms-- Beef cows farms-- Milk cows farms--	36 153 3 817 365 24 181 992 696 5 629 258 252	1.2 .8 1.2 1.1 1.3 1.0
Not reported		3 941	1.1	Cattle and calves sold farms-- number--	36 841 3 161 256	1.2 .5
Operators by principal occupation:						
Farming		60 793	1.1	\$1,000-- farms-- Hogs and pigs inventory farms-- Hogs and pigs sold farms--	2 207 758 29 642 14 050 208	.5 1.0 6
Other		16 331	1.3	farms-- number--	26 677 632 31 589 2 493 020	1.0 .6 .6
Operators by days worked off farm:						
Any		29 553	1.3	Sheep and lambs of all ages inventory farms-- number--	4 573 332 212	1.3 1.0
200 days or more		15 231	1.3	Sheep and lambs sold farms-- number--	4 768 527 476	1.3 .9
Operators by sex:						
Male		74 955	1.1	Horses and ponies inventory farms-- number--	5 493 26 951	1.3 1.3
Female		2 169	1.4	Horses and ponies sold farms-- number--	1 144 6 626	1.4 2.7
Average age of operator	years--	49.8	1.6			

See footnotes at end of table.

**Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More:
1992—Con.**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)	
POULTRY						
Chickens 3 months old or older inventory	farms--	1 663	Oats for grain	farms--	16 995	
number--		12 519 675	acres--	358 543	1.1	
Hens and pullets of laying age	farms--	1 638	bushels--	22 788 605	1.1	
number--		11 130 776	acres--	56 657	1.0	
Broilers and other meat-type chickens sold	farms--	440	Soybeans for beans	farms--	8 182 711	
number--		9 150 430	acres--	350 513 154	.8	
CROPS HARVESTED						
Corn for grain or seed	farms--	67 125	Irish potatoes	farms--	96	
acres--		12 409 950	acres--	1 630	3.2	
bushels--		1 743 398 211	cwt--	323 732	1.6	
Corn for silage or green chop	farms--	9 384	Hay—alfalfa, other tame, small grain, wild, grass	farms--	37 408	
acres--		258 408	silage, green chop, etc. (see text)	acres--	1 628 082	
tons, green--		4 065 550	tons, dry--	4 839 671	1.1	
Wheat for grain	farms--	906	Alfalfa hay	farms--	34 198	
acres--		29 329	acres--	1 270 163	1.2	
bushels--		1 158 460	tons, dry--	4 103 253	1.1	
			Vegetables harvested for sale (see text)	farms--	593	1.4
				acres--	14 061	1.6
			Land in orchards	farms--	195	2.4
				acres--	1 834	3.0

¹Data are based on a sample of farms.

²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains of less than \$1,000.

Table E. Reliability Estimates of Percent Change in State Totals: 1987 to 1992

[For meaning of abbreviations and symbols, see introductory text]

Item	All farms		Farms with sales of \$10,000 or more		
	Percent change from 1987 to 1992	Standard error of estimate	Percent change from 1987 to 1992	Standard error of estimate	
Farms-----	-8.2	1.4	-6.7	1.5	
Land in farms -----	-9	1.2	-8	1.2	
Average size of farm -----	8.0	2.1	6.3	2.2	
Estimated market value of land and buildings ¹ :					
Average per farm -----	39.0	2.8	37.7	2.9	
Average per acre -----	28.0	2.4	28.7	2.4	
Estimated market value of all machinery and equipment ¹ :					
Average per farm -----	30.5	2.7	27.9	2.8	
Farms by size:					
1 to 9 acres -----	-10.6	1.6	-2.3	2.2	
10 to 49 acres -----	-5.8	1.7	17.1	2.1	
50 to 179 acres -----	-11.0	1.6	-6.9	1.8	
180 to 499 acres -----	-13.0	1.6	-14.3	1.6	
500 to 999 acres -----	-3	1.3	-7	1.3	
1,000 to 1,999 acres -----	24.7	(L)	24.4	(L)	
2,000 acres or more -----	52.3	-	53.0	-	
Total cropland -----	-8.8	1.4	-7.4	1.5	
farms-----	-3	1.2	-	1.2	
acres-----	-9.5	1.4	-7.8	1.5	
Harvested cropland -----	11.4	1.3	12.4	1.3	
Irrigated land -----	24.9	2.1	20.8	2.1	
farms-----	25.5	1.8	25.7	1.9	
acres-----	-	-	-	-	
Market value of agricultural products sold -----	\$1,000 --	13.1	1.0	1.0	
Average per farm -----	dollars --	23.3	2.2	2.3	
Crops, including nursery and greenhouse crops -----	\$1,000 --	26.8	1.4	27.4	
Livestock, poultry, and their products -----	\$1,000 --	3.6	.8	.8	
Farms by value of sales:					
Less than \$2,500 -----	-13.2	1.4	(X)	(X)	
\$2,500 to \$4,999 -----	-13.6	1.7	(X)	(X)	
\$5,000 to \$9,999 -----	-14.8	1.5	(X)	(X)	
\$10,000 to \$24,999 -----	-20.7	1.5	-20.7	1.5	
\$25,000 to \$49,999 -----	-16.3	1.7	-16.3	1.7	
\$50,000 to \$99,999 -----	-14.9	1.7	-14.9	1.7	
\$100,000 to \$249,999 -----	8.4	1.6	8.4	1.6	
\$250,000 to \$499,999 -----	35.0	(L)	35.0	(L)	
\$500,000 or more -----	40.3	-	40.3	-	
Total farm production expenses ¹ -----	\$1,000--	16.5	1.5	17.0	
Average per farm -----	dollars --	26.9	2.3	25.3	
Net cash return from agricultural sales for the farm unit (see text) ¹ -----	farms--	-8.2	1.4	-6.7	
\$1,000--		2.2	1.4	2.3	
Average per farm -----	dollars --	11.3	2.3	9.6	
Operators by principal occupation:					
Farming -----	-11.2	1.4	-10.3	1.4	
Other -----	-.8	1.7	9.7	2.2	
Operators by days worked off farm:					
Any -----	-7.7	4.7	-4.4	4.9	
200 days or more -----	-1.4	.5	8.7	5.6	
Livestock and poultry:					
Cattle and calves inventory -----	farms--	-11.8	1.4	-11.3	
number--	-7.9	1.0	-7.6	1.0	
Beef cows -----	farms--	-7.1	1.5	-6.4	1.6
number--	-5.2	1.4	-4.9	1.4	
Milk cows -----	farms--	-24.1	1.3	-22.3	1.4
number--	-12.2	1.3	-11.9	1.3	
Cattle and calves sold -----	farms--	-13.3	1.3	-12.6	1.4
number--	-8.9	.7	-8.7	.7	
Hogs and pigs inventory -----	farms--	-13.3	1.3	-13.2	1.3
number--	9.0	1.0	9.0	1.0	
Hogs and pigs sold -----	farms--	-11.9	1.3	-12.0	1.3
number--	14.2	1.0	14.2	1.0	
Sheep and lambs inventory -----	farms--	-21.7	1.2	-24.4	1.3
number--	-10.2	1.3	-11.8	1.3	
Chickens 3 months old or older inventory -----	farms--	-46.2	.9	-49.6	1.0
number--	31.1	.7	31.6	.7	
Broilers and other meat-type chickens sold -----	farms--	-38.5	1.3	-42.7	1.4
number--	1 281.3	(H)	1 471.8	(H)	
Selected crops harvested:					
Corn for grain or seed -----	farms--	-12.7	1.4	-9.6	1.4
acres--	23.3	1.4	24.4	1.4	
bushels--	37.6	1.5	38.6	1.5	
Corn for silage or green chop -----	farms--	20.7	1.7	21.2	1.7
acres--	27.1	1.3	27.4	1.3	
tons, green--	26.0	1.3	26.4	1.3	
Wheat for grain -----	farms--	-27.9	1.4	-25.2	1.5
acres--	-3.1	1.9	2.3	2.0	
bushels--	.3	1.9	4.0	2.0	
Oats for grain -----	farms--	-29.7	1.1	-28.4	1.1
acres--	-32.4	1.0	-31.8	1.0	
bushels--	-24.8	1.0	-24.3	1.1	
Soybeans for beans -----	farms--	-12.2	1.4	-9.4	1.4
acres--	4.3	1.2	5.0	1.3	
bushels--	8.1	1.3	8.7	1.3	
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) -----	farms--	-7.3	1.4	-6.9	1.5
acres--	-10.5	1.3	-11.0	1.3	
tons, dry--	-9.0	1.3	-9.2	1.3	

¹Data are based on a sample of farms.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-13

Table F. Reliability Estimates for the State and County Totals: 1992

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms		Land in farms		Average size of farm		Average market value of land and buildings per farm ¹		Estimated market value of all machinery and equipment ¹	
	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Iowa -----	96 543	1.1	31 346 565	.9	325	1.4	394 267	1.4	6 647 461	1.0
Adair	891	1.2	328 970	1.1	369	1.6	286 257	3.8	54 061	4.7
Adams	643	1.3	239 800	1.3	373	1.8	236 663	5.0	30 986	10.2
Allamakee	1 000	1.3	321 728	1.2	322	1.7	260 640	4.4	64 197	4.7
Appanoose	827	2.6	238 609	3.0	289	4.0	171 088	7.9	31 874	9.9
Audubon	740	1.1	268 506	1.0	363	1.5	428 944	3.4	59 690	4.6
Benton	1 325	1.0	427 215	.9	322	1.3	448 987	2.6	89 528	4.3
Black Hawk	1 111	.7	299 502	.7	270	1.0	415 869	3.6	79 225	4.3
Boone	923	.8	330 080	.8	358	1.1	572 822	3.3	63 674	3.6
Bremer	1 058	1.1	236 668	1.1	224	1.6	334 099	3.5	75 226	4.3
Buchanan	1 193	1.0	333 115	.9	279	1.4	369 146	5.4	93 917	4.7
Buena Vista	972	.8	341 923	.8	352	1.1	549 084	3.8	85 794	4.2
Butler	1 146	.7	315 448	.7	275	1.0	344 288	3.1	80 339	3.6
Calhoun	899	1.0	345 567	.9	384	1.4	639 883	3.4	83 878	5.9
Carroll	1 197	1.0	359 755	.9	301	1.3	438 211	3.0	80 066	4.6
Cass	905	1.1	347 353	1.0	384	1.4	383 268	3.5	59 587	5.0
Cedar	1 099	.9	338 801	1.0	308	1.3	412 745	3.7	88 444	5.5
Cerro Gordo	821	.8	308 497	.9	376	1.2	538 144	2.9	71 011	4.5
Cherokee	979	1.0	336 254	.9	343	1.4	476 389	3.8	75 107	4.9
Chickasaw	1 007	1.2	274 905	1.1	273	1.6	315 294	5.2	77 073	5.2
Clarke	680	1.3	236 409	1.1	348	1.7	202 554	7.4	22 786	5.7
Clay	770	.9	314 812	.9	409	1.2	596 424	4.7	66 258	5.7
Clayton	1 617	.8	456 954	.8	283	1.1	303 364	4.9	116 516	4.2
Clinton	1 362	1.1	368 114	1.0	270	1.5	340 328	3.4	86 469	3.9
Crawford	1 260	1.3	415 104	1.1	329	1.7	351 086	4.0	78 104	4.6
Dallas	944	.9	312 173	.9	331	1.3	517 569	4.1	66 943	5.5
Davis	892	2.7	275 319	2.6	309	3.7	170 564	6.9	34 384	8.8
Decatur	648	1.1	261 494	1.0	404	1.5	192 742	4.5	23 482	8.6
Delaware	1 367	1.0	336 131	.9	246	1.4	342 258	4.2	109 843	3.4
Des Moines	681	1.0	192 467	1.0	283	1.4	401 573	4.8	47 374	8.4
Dickinson	554	.9	202 249	1.0	365	1.4	485 385	4.7	44 830	7.7
Dubuque	1 653	1.2	343 870	1.1	208	1.7	269 337	3.2	119 790	4.7
Emmet	557	.9	224 811	.9	404	1.3	586 900	4.9	47 464	6.1
Fayette	1 416	1.0	401 625	1.0	284	1.4	314 061	3.2	101 738	4.5
Floyd	882	1.0	287 586	1.0	326	1.5	390 264	4.7	61 001	4.3
Franklin	929	1.0	343 367	1.0	370	1.4	501 782	4.6	72 409	4.2
Fremont	596	.9	302 352	.8	507	1.2	450 547	3.2	58 675	7.7
Greene	851	.8	366 927	.8	431	1.1	585 344	4.2	73 124	4.3
Grundy	853	.8	317 205	.7	372	1.1	619 361	3.0	75 991	4.3
Guthrie	946	1.2	328 885	1.1	348	1.6	377 710	4.9	53 748	4.2
Hamilton	873	.7	332 377	.7	381	1.0	659 810	3.0	86 924	5.4
Hancock	939	.9	329 151	.9	351	1.2	518 542	4.4	83 036	6.0
Hardin	986	.8	332 358	.7	337	1.1	470 566	3.3	82 128	4.4
Harrison	919	1.2	399 155	1.0	434	1.6	414 701	3.6	59 214	4.0
Henry	795	1.1	225 835	1.1	284	1.6	376 862	4.0	47 338	5.3
Howard	881	1.2	260 781	1.1	296	1.6	303 698	4.0	63 513	5.5
Humboldt	677	.7	280 797	.8	415	1.1	632 269	3.4	75 877	5.6
Ida	729	1.4	272 831	1.1	374	1.8	410 880	4.3	47 746	5.1
Iowa -----	977	1.0	321 285	.9	329	1.3	316 867	3.4	65 519	6.8
Jackson	1 326	1.4	346 569	1.3	261	1.9	239 967	4.3	70 063	4.3
Jasper	1 309	1.0	431 185	.9	329	1.3	375 620	2.8	95 361	5.3
Jefferson	740	1.3	227 073	1.3	307	1.8	281 030	5.8	42 395	7.9
Johnson	1 242	1.0	284 537	1.0	229	1.4	357 551	4.3	68 430	5.0
Jones	1 112	1.0	321 950	1.0	290	1.4	347 102	3.3	79 049	4.4
Keokuk	952	1.1	322 401	1.1	339	1.5	324 886	5.0	64 371	5.7
Kossuth	1 592	1.0	615 034	.9	386	1.3	615 677	2.7	151 577	4.0
Lee	872	1.1	266 083	1.1	305	1.5	310 152	4.9	52 104	7.3
Linn	1 529	.9	349 252	.8	228	1.2	356 809	3.5	82 545	3.3
Louisa	554	.9	191 291	1.0	345	1.4	410 769	4.4	35 165	5.8
Lucas	630	2.3	219 370	2.3	348	3.2	195 324	6.1	23 653	9.6
Lyon	1 194	1.5	347 599	1.4	291	2.0	387 429	4.3	72 176	4.6
Madison	1 026	1.1	305 685	1.0	298	1.5	258 508	3.9	53 909	8.9
Mahaska	1 075	1.0	314 887	1.0	293	1.4	385 300	2.9	83 645	5.2
Marion	996	1.2	268 520	1.3	270	1.8	271 520	5.3	54 685	8.4
Marshall	949	.7	312 858	.7	330	1.1	433 790	3.3	67 901	4.8
Mills	563	1.0	237 862	1.0	422	1.4	491 858	4.0	42 171	5.4
Mitchell	825	1.0	263 047	.9	319	1.3	404 547	3.9	60 841	3.9
Monona	822	1.2	392 835	.9	478	1.5	430 858	3.8	64 622	6.0
Monroe	682	1.3	223 638	1.3	328	1.9	178 074	4.7	26 086	7.3
Montgomery	617	1.1	240 100	1.1	389	1.6	349 347	4.6	33 286	5.4
Muscatine	803	.9	219 832	1.0	274	1.4	371 565	4.3	51 208	5.4
O'Brien	1 147	1.1	362 109	1.0	316	1.5	504 319	3.5	80 355	4.6
Oscceola	737	1.4	260 780	1.3	354	1.9	543 750	4.8	68 963	5.9
Page	916	1.1	318 778	1.1	348	1.5	285 071	3.4	52 639	6.4
Palo Alto	841	.9	338 730	.9	403	1.3	548 521	3.8	65 031	4.4
Plymouth	1 615	1.2	518 247	1.0	321	1.6	416 492	2.7	99 318	2.8
Pocahontas	919	.9	359 442	.9	391	1.3	595 479	3.4	86 828	4.9
Polk	832	1.1	229 818	1.0	276	1.5	383 678	5.2	61 184	4.4
Pottawattamie	1 441	1.1	542 855	1.0	377	1.5	445 274	3.6	101 944	3.7
Poweshiek	933	1.2	340 982	1.1	365	1.7	371 993	4.7	66 279	5.8
Ringgold	676	1.3	293 266	1.1	434	1.7	212 858	4.9	29 049	6.4
Sac	967	1.1	364 172	.9	377	1.4	550 472	3.9	81 540	5.2
Scott	913	1.1	233 217	1.0	255	1.5	508 395	4.8	69 330	4.4
Shelby	1 088	1.2	353 570	1.1	325	1.6	387 197	5.5	75 488	4.6
Sioux	1 998	1.2	495 769	1.0	248	1.5	417 799	2.6	133 280	4.2

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms		Land in farms		Average size of farm		Average market value of land and buildings per farm ¹		Estimated market value of all machinery and equipment ¹		
	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	
Story -----	990	.8	331 211	.7	335	1.1	515 256	3.8	71 877	5.7	
Tama -----	1 294	1.0	401 858	.9	311	1.4	424 547	4.5	83 440	4.4	
Taylor -----	741	1.4	278 922	1.2	376	1.8	246 073	4.7	33 243	7.0	
Union -----	671	1.2	236 265	1.2	352	1.7	254 377	6.4	35 233	9.3	
Van Buren -----	752	2.6	241 422	2.6	321	3.6	217 531	7.4	27 083	6.3	
Wapello -----	757	1.3	195 021	1.4	258	1.9	245 474	6.5	32 429	8.0	
Warren -----	1 216	1.1	302 487	1.1	249	1.6	266 112	5.7	50 129	4.1	
Washington -----	1 078	1.1	309 508	1.0	287	1.5	370 355	4.3	71 136	4.9	
Wayne -----	734	1.2	282 723	1.1	385	1.6	200 662	4.2	32 357	6.1	
Webster -----	1 059	.9	408 462	.8	386	1.2	598 749	3.5	92 717	4.8	
Winnebago -----	645	1.0	231 977	1.0	360	1.4	469 698	4.0	49 998	5.5	
Winnesiek -----	1 495	1.5	357 684	1.4	239	2.0	209 058	3.9	95 740	4.6	
Woodbury -----	1 254	1.2	442 247	1.0	353	1.5	374 368	4.6	74 027	3.9	
Worth -----	642	.8	224 632	.8	350	1.1	414 728	3.1	53 232	5.1	
Wright -----	812	.7	353 683	.6	436	.9	703 215	3.7	82 447	5.2	
Average market value of all machinery and equipment per farm ¹		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses ¹					
Geographic area							Total farm production expenses				
							Farms		Value		
	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	
Iowa -----	68 967	1.5	10 099 786	.6	104 614	1.3	96 532	1.1	7 744 947	.7	
Adair -----	60 607	4.8	75 248	1.0	84 453	1.5	892	1.3	58 027	2.0	
Adams -----	48 951	10.4	46 160	1.2	71 788	1.8	643	1.4	31 960	4.5	
Allamakee -----	64 262	4.9	89 509	1.1	89 509	1.7	999	1.4	70 856	2.5	
Appanoose -----	38 542	10.3	27 455	2.8	33 198	3.8	827	2.6	22 603	5.5	
Audubon -----	80 662	4.7	93 751	.7	126 691	1.3	740	1.3	75 554	1.6	
Benton -----	67 568	4.4	151 713	.7	114 500	1.2	1 325	1.0	122 153	1.6	
Black Hawk -----	71 374	4.4	112 562	.5	101 316	.9	1 110	.8	90 781	1.8	
Boone -----	69 060	3.7	102 944	.6	111 532	1.0	922	.9	70 276	2.4	
Bremer -----	71 102	4.4	89 215	1.0	84 325	1.5	1 058	1.2	69 576	2.1	
Buchanan -----	78 657	4.8	116 558	.8	97 701	1.3	1 194	1.0	93 014	1.9	
Buena Vista -----	88 630	4.4	157 282	.5	161 812	.9	973	.9	115 294	1.4	
Butler -----	70 103	3.7	114 274	.6	99 715	1.0	1 146	.8	88 432	1.7	
Calhoun -----	93 405	6.0	112 277	.8	124 891	1.3	899	1.2	77 260	2.0	
Carroll -----	66 945	4.8	196 002	.5	163 745	1.1	1 196	1.0	147 876	1.1	
Cass -----	65 770	5.2	96 388	.7	106 506	1.3	906	1.2	73 127	2.0	
Cedar -----	80 404	5.6	117 793	.8	107 182	1.2	1 100	1.0	98 022	2.0	
Cerro Gordo -----	86 493	4.6	91 286	.8	111 189	1.1	821	1.0	73 539	2.2	
Cherokee -----	76 796	5.0	127 906	.7	130 650	1.2	978	1.1	93 678	2.0	
Chickasaw -----	76 537	5.4	100 101	.8	99 405	1.5	1 007	1.4	81 274	2.1	
Clarke -----	33 509	5.9	27 874	1.2	40 991	1.7	680	1.3	22 362	4.7	
Clay -----	86 050	5.8	105 076	.6	136 462	1.1	770	1.1	77 073	2.2	
Clayton -----	72 101	4.3	155 641	.7	96 253	1.1	1 616	.9	116 768	1.8	
Clinton -----	63 487	4.1	135 458	.8	99 455	1.4	1 362	1.1	112 873	2.0	
Crawford -----	62 383	4.8	124 295	.9	98 647	1.6	1 259	1.3	99 658	2.3	
Dallas -----	71 064	5.6	87 356	.7	92 538	1.2	942	1.0	58 265	2.1	
Davis -----	38 896	9.3	40 022	2.4	44 868	3.6	892	3.0	30 796	4.4	
Decatur -----	36 181	8.7	41 090	.8	63 410	1.4	649	1.3	33 070	2.9	
Delaware -----	80 412	3.5	178 922	.7	130 886	1.3	1 366	1.1	141 535	1.5	
Des Moines -----	69 668	8.5	51 482	.9	75 598	1.4	680	1.2	36 826	3.0	
Dickinson -----	80 921	7.8	71 649	.7	129 331	1.1	554	1.1	55 928	2.3	
Dubuque -----	72 512	4.9	184 886	.9	111 849	1.5	1 652	1.3	140 395	1.9	
Emmet -----	85 214	6.2	64 882	.8	116 485	1.2	557	1.1	45 528	4.2	
Fayette -----	71 849	4.6	151 654	.8	107 100	1.3	1 416	1.1	117 906	1.8	
Floyd -----	69 162	4.5	92 274	.8	104 619	1.3	882	1.1	69 776	2.3	
Franklin -----	77 943	4.4	118 120	.8	127 148	1.3	929	1.1	93 923	2.0	
Fremont -----	98 283	7.8	82 603	.6	138 596	1.1	597	1.1	55 894	2.8	
Greene -----	85 927	4.4	104 736	.7	123 074	1.1	851	.9	68 540	2.4	
Grundy -----	88 982	4.4	128 227	.5	150 325	1.0	854	.9	100 818	1.5	
Guthrie -----	56 876	4.4	84 268	.8	89 078	1.4	946	1.3	63 319	1.8	
Hamilton -----	99 342	5.5	142 414	.5	163 131	.9	875	.9	108 917	1.8	
Hancock -----	88 430	6.0	108 638	.7	115 695	1.1	939	.9	85 195	2.2	
Hardin -----	83 294	4.4	143 724	.5	145 764	.9	986	.9	110 546	1.4	
Harrison -----	64 433	4.2	100 625	.9	109 494	1.5	919	1.3	71 287	2.0	
Henry -----	60 150	5.5	65 017	1.0	81 783	1.5	795	1.2	47 914	2.1	
Howard -----	72 010	5.7	73 822	1.0	83 794	1.6	882	1.4	62 502	2.5	
Humboldt -----	112 078	5.6	91 258	.6	134 798	1.0	677	.9	61 465	2.6	
Ida -----	65 585	5.3	88 403	.9	121 266	1.6	728	1.7	66 337	2.5	
Iowa -----	66 992	6.9	95 539	.7	97 788	1.2	978	1.1	77 227	2.4	
Jackson -----	53 280	4.6	103 597	1.1	78 127	1.7	1 326	1.4	95 024	2.1	
Jasper -----	72 851	5.4	135 428	.7	103 459	1.2	1 309	1.0	98 748	1.9	
Jefferson -----	57 995	8.1	52 919	1.0	71 511	1.7	740	1.4	37 803	2.9	
Johnson -----	55 141	5.1	99 531	.9	80 138	1.3	1 241	1.1	81 739	2.1	
Jones -----	71 087	4.5	128 284	.7	115 363	1.2	1 112	1.1	104 164	1.7	
Keokuk -----	67 617	5.8	83 181	.9	87 375	1.4	952	1.2	65 784	2.3	

See footnotes at end of table.

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Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Average market value of all machinery and equipment per farm ¹		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses ¹			
	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total farm production expenses			
							Farms		Value	
							Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Kossuth -----	95 212	4.1	190 116	.7	119 420	1.2	1 592	1.0	148 358	1.9
Lee -----	60 166	7.4	73 550	.9	84 347	1.4	873	1.2	59 317	2.7
Linn -----	53 986	3.4	102 380	.7	66 959	1.1	1 529	1.0	82 697	2.2
Louisa -----	63 475	5.9	46 151	1.0	83 306	1.4	554	1.1	37 360	2.8
Lucas -----	37 604	9.9	25 372	2.3	40 273	3.2	629	2.4	21 369	4.8
Lyon -----	60 449	4.9	173 419	.9	145 242	1.7	1 194	1.7	137 665	2.4
Madison -----	52 542	9.0	69 453	.7	67 693	1.3	1 026	1.2	55 294	2.0
Mahaska -----	77 809	5.3	115 975	.7	107 884	1.2	1 075	1.1	90 047	1.7
Marion -----	54 905	8.5	65 241	1.1	65 503	1.7	996	1.4	50 620	4.4
Marshall -----	71 550	4.9	101 491	.6	106 946	1.0	949	.8	79 825	2.2
Mills -----	74 771	5.5	64 817	.8	115 128	1.3	564	1.2	48 869	2.8
Mitchell -----	75 113	4.3	106 680	.7	129 309	1.2	825	1.2	87 406	1.9
Monona -----	78 616	6.1	99 592	.8	121 159	1.4	822	1.4	68 801	2.1
Monroe -----	38 194	7.4	29 670	1.3	43 504	1.9	674	1.9	23 838	5.3
Montgomery -----	54 036	5.5	63 351	.9	102 676	1.4	616	1.2	45 621	2.6
Muscatine -----	63 771	5.5	65 427	.9	81 478	1.3	803	1.0	51 553	2.4
O'Brien -----	70 118	4.8	146 180	.8	127 445	1.3	1 146	1.3	110 657	1.9
Osceola -----	93 573	6.1	94 627	1.0	128 394	1.7	737	1.4	69 305	2.0
Page -----	57 845	6.5	81 768	.9	89 267	1.4	917	1.1	56 342	2.9
Palo Alto -----	77 418	4.5	107 772	.8	128 148	1.2	840	1.1	74 959	2.0
Plymouth -----	61 497	3.1	221 185	.7	136 956	1.4	1 615	1.3	173 882	1.2
Pocahontas -----	94 481	5.0	110 051	.8	119 751	1.2	919	1.1	76 945	2.0
Polk -----	74 162	4.6	61 720	.9	74 183	1.4	832	1.2	43 034	3.0
Pottawattamie -----	70 843	3.9	180 073	.8	124 964	1.4	1 439	1.3	127 086	1.5
Poweshiek -----	71 039	5.9	86 384	1.0	92 588	1.6	933	1.2	65 011	2.1
Ringgold -----	43 099	6.5	38 279	1.1	56 625	1.6	675	1.4	30 028	3.7
Sac -----	84 236	5.3	146 389	.6	151 385	1.2	968	1.2	111 906	1.8
Scott -----	75 688	4.5	91 084	.8	99 763	1.4	916	1.2	73 702	2.2
Shelby -----	69 510	4.8	124 076	.9	114 041	1.5	1 086	1.3	95 089	2.0
Sioux -----	66 707	4.4	422 040	.5	211 231	1.2	1 998	1.2	331 099	1.0
Story -----	73 419	5.8	106 178	.6	107 250	1.0	989	.9	74 917	2.0
Tama -----	64 833	4.6	109 630	.8	84 722	1.3	1 293	1.1	92 072	2.5
Taylor -----	44 802	7.1	46 692	1.1	63 012	1.8	742	1.4	39 778	3.3
Union -----	52 430	9.4	48 481	1.0	72 251	1.6	672	1.3	38 257	2.6
Van Buren -----	35 967	6.9	36 654	2.4	48 742	3.5	753	2.8	27 163	4.2
Wapello -----	42 782	8.1	38 168	1.3	50 420	1.9	758	1.4	27 587	3.6
Warren -----	41 879	4.4	56 996	1.0	46 871	1.5	1 216	1.1	44 628	2.9
Washington -----	65 989	5.1	128 948	.7	119 618	1.3	1 078	1.1	98 536	1.6
Wayne -----	44 630	6.3	33 912	1.1	46 202	1.6	733	1.2	28 007	3.5
Webster -----	88 218	5.0	126 924	.7	119 853	1.1	1 059	1.0	82 000	2.3
Winnebago -----	77 637	5.6	60 515	1.0	93 822	1.4	644	1.1	48 704	3.2
Winneshiek -----	64 040	4.9	125 003	1.3	83 614	1.9	1 495	1.7	95 420	2.4
Woodbury -----	59 317	4.1	150 949	.6	120 374	1.3	1 255	1.2	127 464	1.5
Worth -----	82 787	5.2	65 724	.7	102 374	1.1	643	1.0	53 017	1.9
Wright -----	101 661	5.3	99 379	.6	122 388	.9	811	.9	70 502	2.5
Farm production expenses ¹ —Con.										
Livestock and poultry purchased										
Geographic area	Farms		Value		Farms		Value		Seeds, bulbs, plants, and trees	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Iowa -----	41 068	1.3	1 490 792	.7	58 661	1.2	1 317 636	.7	78 194	1.1
Adair -----	372	9.5	9 361	7.9	637	5.2	8 444	9.6	740	4.1
Adams -----	254	12.4	5 066	5.7	417	6.5	5 194	9.2	480	5.8
Allamakee -----	504	7.5	10 384	7.0	797	3.2	17 152	4.0	774	3.1
Appanoose -----	253	12.7	3 755	20.3	545	6.4	3 117	15.8	435	7.4
Audubon -----	404	7.6	20 573	3.7	539	5.1	11 377	3.9	594	3.4
Benton -----	639	5.9	27 168	2.0	833	4.2	21 212	2.9	1 097	2.7
Black Hawk -----	442	8.1	10 317	4.3	522	6.5	12 912	3.4	928	2.8
Boone -----	305	10.2	11 707	6.2	385	8.8	9 520	6.3	788	2.3
Bremer -----	490	7.2	6 298	5.8	621	5.4	10 503	4.1	881	3.2
Buchanan -----	612	5.7	10 935	6.0	743	4.7	13 208	6.0	1 007	2.7
Buena Vista -----	427	6.8	26 264	2.3	469	6.7	28 064	2.8	903	1.7
Butler -----	555	6.5	12 520	4.1	785	4.3	15 604	2.9	905	2.5
Calhoun -----	345	9.7	13 210	5.0	419	8.2	10 795	5.7	812	3.1
Carroll -----	530	5.7	55 385	1.6	754	4.3	29 571	2.3	1 035	2.2
Cass -----	377	8.6	16 773	2.8	602	5.3	8 811	4.5	802	2.8
Cedar -----	453	8.5	13 531	7.6	669	6.0	15 802	5.0	931	2.5
Cerro Gordo -----	280	10.2	5 268	7.3	384	7.2	8 478	5.2	698	3.2
Cherokee -----	490	7.3	22 122	4.1	653	5.9	14 622	5.7	838	3.1
Chickasaw -----	506	6.7	16 626	3.8	639	4.9	11 995	5.5	776	3.9

See footnotes at end of table.

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Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Livestock and poultry purchased				Feed for livestock and poultry				Seeds, bulbs, plants, and trees			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Clarke -----	308	9.9	3 554	18.2	511	6.2	3 460	12.4	386	9.1	827	9.7
Clay -----	345	9.2	13 510	4.5	457	7.2	11 981	4.2	673	3.3	4 093	4.1
Clayton -----	780	5.6	14 420	5.9	1 251	2.8	28 451	3.0	1 275	2.6	4 639	3.9
Clinton -----	692	5.6	29 759	3.4	933	4.0	14 301	4.5	1 134	2.4	4 794	3.0
Crawford -----	553	7.5	22 105	4.8	852	5.0	14 966	6.3	983	3.8	4 746	3.6
Dallas -----	251	11.8	6 288	5.3	444	7.6	5 245	8.2	725	3.7	3 938	4.1
Davis -----	365	9.8	3 977	9.1	642	5.4	6 433	8.7	579	6.3	1 183	7.8
Decatur -----	194	13.2	9 688	8.1	435	6.0	6 993	5.9	356	6.1	855	8.9
Delaware -----	875	4.5	24 670	4.5	1 110	3.0	37 911	3.6	1 100	3.2	4 862	3.3
Des Moines -----	136	17.1	2 442	5.5	325	9.6	4 656	10.3	567	3.2	2 581	4.2
Dickinson -----	189	14.4	16 149	3.7	229	11.0	8 397	4.9	490	2.1	2 875	6.4
Dubuque -----	882	5.3	29 206	5.1	1 349	2.5	38 891	3.0	1 416	2.4	3 785	3.3
Emmet -----	160	15.9	8 948	7.8	225	13.0	4 093	8.6	492	3.7	2 879	6.6
Fayette -----	705	4.9	16 584	5.5	924	3.6	22 067	3.9	1 182	2.7	5 649	2.8
Floyd -----	359	8.1	10 520	6.7	469	7.2	8 367	7.3	739	2.9	4 518	3.4
Franklin -----	349	9.9	14 017	6.1	515	7.2	16 212	6.3	766	3.3	5 270	5.8
Fremont -----	184	14.0	11 995	3.6	333	9.1	5 127	5.7	492	3.7	3 206	4.8
Greene -----	248	12.1	9 306	6.7	432	7.3	6 453	6.8	742	2.5	4 986	4.7
Grundy -----	347	8.2	21 282	2.2	472	6.6	14 939	3.3	720	2.9	4 519	2.9
Guthrie -----	334	10.8	9 015	4.3	579	6.4	11 558	3.2	734	3.7	3 204	4.9
Hamilton -----	257	10.6	13 030	1.7	399	8.6	27 414	2.3	770	2.8	5 337	3.0
Hancock -----	410	8.0	12 254	11.9	523	6.7	13 244	7.2	840	2.5	5 239	4.7
Hardin -----	381	8.2	17 979	3.1	537	6.3	24 775	2.0	844	2.8	4 954	3.0
Harrison -----	307	10.8	11 541	7.3	428	8.5	5 709	7.2	794	2.8	5 031	3.4
Henry -----	291	11.3	4 852	6.9	394	8.9	9 405	3.2	613	3.7	2 945	6.6
Howard -----	345	11.2	6 843	9.9	580	6.3	10 639	6.3	727	4.5	3 900	4.8
Humboldt -----	210	12.5	9 220	6.0	241	11.1	7 242	8.0	639	1.9	4 338	3.8
Ida -----	356	8.0	15 722	6.9	482	6.8	8 490	7.0	599	4.9	3 299	3.5
Iowa -----	448	7.2	15 281	6.4	719	4.2	13 052	6.2	741	3.9	3 767	3.5
Jackson -----	757	5.8	26 452	5.0	1 064	3.2	19 456	3.8	958	3.8	2 630	4.8
Jasper -----	588	6.7	17 256	6.0	810	4.8	17 942	4.7	1 061	2.9	5 459	3.5
Jefferson -----	252	15.6	4 945	11.0	437	9.7	5 919	8.2	572	5.3	2 349	7.4
Johnson -----	594	6.3	12 254	9.8	872	4.1	19 858	4.0	975	3.0	3 812	4.2
Jones -----	556	6.6	24 581	3.9	789	4.2	20 542	3.7	911	2.8	4 293	4.0
Keokuk -----	408	7.2	7 899	7.6	610	5.3	14 610	6.6	754	3.2	3 374	5.5
Kossuth -----	576	7.6	19 253	4.8	679	6.4	15 286	5.3	1 469	1.6	10 448	3.0
Lee -----	353	10.3	9 983	10.2	562	6.5	10 244	5.6	678	3.5	2 955	5.8
Linn -----	562	7.6	10 325	5.6	863	5.3	11 688	6.7	1 175	2.6	4 653	3.8
Louisa -----	196	12.0	3 044	13.2	281	9.5	4 155	11.7	470	3.5	2 756	5.3
Lucas -----	259	10.4	2 630	10.2	422	6.5	3 701	9.5	378	6.9	720	6.2
Lyon -----	675	5.9	47 340	3.8	849	4.5	28 333	5.1	912	3.7	4 536	5.1
Madison -----	376	9.5	6 955	6.1	679	4.8	12 523	2.7	775	2.3	2 461	3.9
Mahaska -----	530	6.6	18 651	4.2	678	4.9	19 631	3.0	911	2.7	3 744	3.2
Marion -----	416	9.3	8 493	7.9	637	5.7	8 247	8.8	803	3.7	2 961	7.7
Marshall -----	340	9.3	9 598	9.6	484	7.1	9 737	5.3	816	2.7	4 738	3.8
Mills -----	192	11.2	8 938	6.2	286	8.7	4 305	8.7	489	2.9	3 052	3.7
Mitchell -----	384	7.7	18 031	4.2	553	4.9	16 699	4.0	701	3.6	4 056	3.7
Monona -----	297	10.7	14 686	4.9	395	8.2	6 955	7.9	685	3.3	4 502	3.4
Monroe -----	311	9.8	5 457	12.2	454	5.6	4 166	10.3	369	8.6	734	7.6
Montgomery -----	251	9.7	8 166	9.2	399	6.1	4 927	7.4	525	3.4	2 318	4.9
Muscatine -----	281	9.9	5 272	9.5	413	7.7	9 299	6.6	654	3.8	3 005	5.3
O'Brien -----	618	6.1	21 810	4.8	729	5.1	23 488	7.3	964	3.2	5 068	4.8
Osceola -----	257	10.4	14 486	4.6	347	9.6	11 317	4.5	651	3.7	3 671	5.4
Page -----	368	8.9	8 636	9.6	563	5.6	6 653	10.6	786	2.8	3 404	4.5
Palo Alto -----	377	7.3	14 190	4.8	456	6.4	9 547	4.4	743	2.5	4 427	3.6
Plymouth -----	871	4.7	54 173	2.0	1 094	3.4	31 380	2.7	1 311	2.6	6 403	2.7
Pocahontas -----	285	9.7	11 086	4.7	351	9.1	9 392	5.0	858	2.3	5 473	3.8
Polk -----	257	12.3	3 531	9.2	345	10.0	3 578	9.9	607	4.4	3 410	3.6
Pottawattamie -----	610	7.2	31 611	2.9	918	4.4	12 633	5.2	1 223	2.4	7 256	3.2
Poweshiek -----	465	8.3	9 568	5.8	658	5.3	10 711	6.1	729	4.7	3 512	5.0
Ringgold -----	294	10.7	4 001	12.7	517	5.5	5 233	8.1	465	6.1	1 272	7.1
Sac -----	416	9.4	27 603	3.1	537	7.1	20 239	5.8	833	3.3	5 012	5.2
Scott -----	380	8.5	9 406	6.3	489	7.3	10 274	4.1	738	4.0	3 851	4.2
Shelby -----	494	6.7	18 505	4.2	688	4.4	15 404	3.3	922	2.9	4 989	3.0
Sioux -----	1 149	3.8	144 653	1.3	1 365	3.1	76 094	1.8	1 605	2.2	6 826	2.3
Story -----	375	9.4	10 711	15.2	465	7.9	10 185	6.1	851	2.4	4 368	4.1
Tama -----	593	6.7	10 730	6.3	806	4.6	10 970	4.0	1 008	2.6	5 265	3.4
Taylor -----	306	9.5	6 392	12.3	446	7.5	5 126	8.1	604	4.6	2 021	5.6
Union -----	262	13.1	7 039	5.8	404	8.5	8 592	6.0	450	6.1	1 323	6.3
Van Buren -----	288	11.2	2 829	12.4	497	6.3	4 822	5.7	520	5.8	1 417	9.5
Wapello -----	267	11.9	4 395	11.5	372	9.5	3 787	9.9	548	4.9	1 439	7.8
Warren -----	444	9.1	4 848	8.1	741	5.8	6 005	9.4	886	3.0	2 713	4.8
Washington -----	566	6.3	13 645	6.5	825	3.3	31 002	3.5	847	3.8	3 900	4.8
Wayne -----	219	11.5	2 912	10.8	467	4.9	3 676	10.5	597	4.0	1 550	4.7
Webster -----	353	10.0	7 675	14.5	414	9.0	14 422	4.1	916	2.7	5 564	4.6
Winnebago -----	184	13.6	2 665	13.7	279	9.8	4 251	10.8	575	2.4	3 630	4.7
Winneshiek -----	758	6.4	14 829	9.8	1 109	3.4	22 713	5.3	1 175	3.1	3 939	4.8
Woodbury -----	543	7.2	46 474	2.5	732	5.9	16 675	3.2	953	2.6	5 562	4.2
Worth -----	236	10.0	5 065	5.1	373	7.3	7 944	6.4	517	3.9	3 442	4.1
Wright -----	180	13.8	5 697	15.5	255	10.9	6 447	10.4	729	2.4	5 220	5.7

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-17

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Iowa -----	74 421	1.2	578 142	1.0	77 540	1.1	424 136	1.0	92 977	1.1	379 607	.9
Adair -----	682	4.0	4 781	5.0	775	4.1	4 048	5.4	863	2.3	2 972	5.1
Adams -----	459	6.1	2 722	11.0	502	5.3	1 749	8.5	579	3.8	2 013	11.6
Allamakee -----	765	3.4	3 790	5.1	795	3.5	2 020	9.7	960	1.9	3 490	3.7
Appanoose -----	523	6.3	2 366	11.2	497	7.3	1 029	14.0	765	3.5	1 435	6.4
Audubon -----	589	3.4	4 925	3.8	579	4.0	3 667	3.8	690	2.6	3 250	2.8
Benton -----	1 051	2.7	9 073	4.4	1 136	2.7	6 677	3.9	1 311	1.2	4 956	2.9
Black Hawk -----	902	2.9	7 799	5.0	903	3.1	5 705	5.2	1 103	.9	4 701	3.6
Boone -----	783	2.3	6 173	4.4	767	2.7	4 631	4.1	901	1.4	3 372	3.5
Bremer -----	850	3.1	6 356	4.2	889	3.2	4 232	4.1	1 057	1.2	3 832	3.2
Buchanan -----	959	3.2	8 616	4.8	1 002	3.0	5 948	4.5	1 177	1.4	5 184	2.6
Buena Vista -----	877	1.6	7 251	3.9	852	2.8	5 535	4.8	942	1.6	4 402	3.3
Butler -----	854	3.3	6 162	3.7	882	2.7	5 793	3.8	1 131	1.1	4 949	4.1
Calhoun -----	764	3.7	7 804	4.0	739	3.9	5 552	4.0	855	1.9	3 957	4.4
Carroll -----	972	2.7	6 925	3.4	1 024	2.3	4 886	3.5	1 140	1.7	4 874	2.9
Cass -----	721	3.6	5 828	6.9	772	3.4	4 987	5.0	870	1.7	3 675	3.4
Cedar -----	869	3.1	7 738	5.0	950	3.1	6 380	4.8	1 080	1.3	5 509	3.3
Cerro Gordo -----	647	3.3	7 259	3.6	701	2.9	5 564	4.0	772	2.2	4 926	2.7
Cherokee -----	784	3.0	6 145	4.4	840	3.9	4 656	5.1	957	1.8	4 581	4.6
Chickasaw -----	772	4.0	6 289	4.1	760	4.3	4 630	5.2	935	2.3	4 185	3.7
Clarke -----	391	9.1	1 383	8.5	373	9.5	1 110	9.6	680	1.3	1 466	5.1
Clay -----	657	3.6	5 632	3.9	656	3.5	4 463	6.4	760	1.4	3 768	5.4
Clayton -----	1 190	2.9	7 326	5.9	1 334	2.6	4 405	4.8	1 566	1.4	6 109	3.8
Clinton -----	1 092	2.8	9 091	4.6	1 174	2.4	5 866	4.3	1 316	1.7	5 144	3.9
Crawford -----	985	4.0	8 295	4.8	1 004	4.0	5 367	5.7	1 212	1.9	4 331	4.4
Dallas -----	696	4.2	5 700	4.5	760	3.7	4 653	4.2	935	1.2	3 086	4.4
Davis -----	585	6.4	2 142	8.4	552	6.4	1 399	9.2	843	3.5	1 690	7.2
Decatur -----	346	7.2	1 537	8.5	377	6.9	900	8.9	566	2.7	1 552	4.6
Delaware -----	1 037	3.4	7 775	4.5	1 172	2.8	4 628	3.8	1 328	1.5	6 899	3.1
Des Moines -----	527	3.8	3 929	5.5	581	3.8	2 654	6.6	641	2.8	2 016	4.9
Dickinson -----	443	3.6	4 517	8.0	465	4.1	2 655	8.1	533	2.7	2 467	6.3
Dubuque -----	1 327	2.9	7 149	6.2	1 336	2.8	3 053	3.9	1 611	1.5	5 804	2.6
Emmet -----	450	4.8	4 486	5.1	452	5.2	2 766	7.2	534	1.9	3 042	5.7
Fayette -----	1 132	2.8	10 020	3.7	1 206	2.6	6 216	3.8	1 377	1.5	6 025	2.8
Floyd -----	700	3.6	6 155	5.1	687	3.9	4 462	4.8	852	1.7	4 097	3.0
Franklin -----	766	3.6	7 251	5.3	768	3.7	5 726	6.3	925	1.1	5 093	3.9
Fremont -----	528	3.5	5 181	8.3	506	3.8	4 405	8.5	565	2.5	2 862	4.2
Greene -----	727	2.4	7 327	4.7	723	3.1	5 359	4.0	841	1.3	3 742	4.0
Grundy -----	672	3.4	6 952	3.7	716	2.6	6 958	3.8	830	1.6	3 892	3.5
Guthrie -----	710	4.0	5 830	6.0	712	4.4	3 795	5.2	899	2.1	3 178	3.7
Hamilton -----	712	3.6	6 179	4.3	739	3.2	6 407	3.7	857	1.6	5 231	4.0
Hancock -----	781	3.1	6 581	5.3	821	2.9	5 421	8.0	922	1.3	5 323	4.5
Hardin -----	794	3.3	7 007	5.7	853	2.9	6 513	3.0	984	.9	5 072	2.6
Harrison -----	780	2.8	7 755	4.2	774	3.4	6 095	4.0	864	2.0	4 136	4.4
Henry -----	601	4.0	4 466	5.6	623	4.2	3 183	7.7	732	2.8	2 375	4.0
Howard -----	709	4.5	6 110	6.4	743	4.7	3 917	5.8	848	2.5	3 657	4.3
Humboldt -----	604	2.8	6 326	5.0	605	2.9	4 505	4.9	661	1.7	3 280	3.7
Ida -----	548	6.0	5 024	5.5	603	5.1	3 761	4.8	677	3.4	2 869	4.1
Iowa -----	645	4.4	5 016	4.5	709	4.2	4 568	5.0	960	1.6	3 772	3.6
Jackson -----	859	4.8	4 865	7.0	928	4.3	2 773	6.7	1 257	2.1	4 115	4.0
Jasper -----	1 041	3.0	7 963	3.1	1 048	3.0	6 046	4.3	1 258	1.7	4 567	2.9
Jefferson -----	579	5.1	3 524	6.9	500	6.7	2 322	7.3	695	1.9	2 206	5.0
Johnson -----	812	4.2	5 308	5.9	997	2.9	4 652	6.3	1 166	1.9	4 108	3.5
Jones -----	868	3.1	6 868	4.3	940	2.9	5 028	5.4	1 034	2.4	4 829	3.6
Keokuk -----	724	3.5	5 626	5.2	749	3.6	3 819	6.2	876	2.5	3 421	4.8
Kossuth -----	1 427	2.0	13 549	3.2	1 380	2.3	9 330	3.7	1 578	1.2	9 501	2.9
Lee -----	644	4.3	4 407	5.7	625	5.3	3 007	5.7	825	2.9	2 942	3.7
Linn -----	1 037	3.8	6 597	4.6	1 207	2.9	5 378	4.9	1 477	1.4	4 472	4.5
Louisa -----	448	4.3	3 693	5.1	453	3.8	3 121	5.4	540	2.0	2 254	5.3
Lucas -----	364	6.6	1 541	10.4	300	8.7	771	8.6	612	2.8	1 292	5.9
Lyon -----	823	4.3	5 613	5.2	900	3.8	4 550	4.6	1 128	2.8	4 430	3.9
Madison -----	709	4.0	3 814	4.8	825	3.5	2 992	4.8	1 002	1.5	2 502	5.2
Mahaska -----	866	3.2	5 486	4.6	909	3.1	4 281	4.5	1 016	1.9	4 029	3.3
Marion -----	778	4.1	3 448	5.5	790	4.0	2 836	9.6	968	2.0	2 321	5.6
Marshall -----	766	3.5	6 435	5.7	872	2.3	6 291	4.6	924	1.5	4 304	4.3
Mills -----	432	4.1	4 488	4.5	484	3.2	3 709	3.5	542	2.4	2 497	5.1
Mitchell -----	682	3.8	5 162	5.9	685	4.0	3 851	4.1	812	1.6	4 222	3.5
Monona -----	683	3.1	7 768	3.3	684	3.7	5 318	4.9	810	1.7	3 681	4.1
Monroe -----	361	8.8	1 268	8.5	403	7.7	770	12.5	635	3.4	1 306	6.0
Montgomery -----	506	3.6	3 859	5.3	512	3.7	2 749	5.9	593	2.4	2 726	7.1
Muscatine -----	607	4.5	4 413	6.9	703	3.5	2 908	5.9	744	2.5	2 924	3.5
O'Brien -----	932	3.3	7 401	4.0	949	3.4	5 759	5.7	1 114	1.4	4 699	3.9
Oscceola -----	626	4.0	5 003	5.1	591	4.7	3 792	6.1	734	1.4	3 875	6.9
Page -----	750	3.2	4 671	5.3	801	3.1	3 398	6.0	887	2.0	2 840	4.5
Palo Alto -----	736	2.9	7 018	6.3	747	2.9	4 368	5.5	804	2.0	4 507	4.4
Plymouth -----	1 273	2.5	9 107	2.8	1 321	2.8	7 033	3.3	1 543	1.9	6 943	2.4
Pocahontas -----	810	2.6	7 599	4.4	807	2.9	5 357	4.9	904	1.4	4 469	3.6
Polk -----	568	4.0	4 326	4.3	595	4.7	2 997	6.4	810	1.9	2 452	3.7
Pottawattamie -----	1 187	2.5	10 612	4.1	1 220	2.6	7 990	3.9	1 392	1.7	6 536	3.5
Poweshiek -----	698	5.2	5 639	5.2	739	4.0	3 630	4.5	902	1.9	3 843	3.6

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Ringgold -----	450	6.4	2 620	9.5	489	6.1	1 346	8.7	638	2.8	2 082	4.5
Sac -----	793	3.5	7 084	5.2	791	3.0	5 848	6.2	960	1.5	4 713	4.0
Scott -----	722	4.0	5 783	5.0	794	3.0	4 606	6.1	892	1.6	3 938	3.8
Shelby -----	901	3.0	8 043	4.0	950	2.8	5 646	4.2	1 054	1.7	4 563	3.2
Sioux -----	1 470	2.6	10 019	3.4	1 602	2.7	7 088	3.2	1 921	1.6	7 548	2.7
Story -----	761	3.7	6 519	4.7	816	3.2	4 398	4.5	962	1.7	3 542	3.4
Tama -----	943	2.9	9 124	5.3	1 109	2.6	6 895	3.3	1 251	1.6	4 794	5.2
Taylor -----	567	5.3	3 189	5.7	553	5.1	2 037	6.4	687	3.5	2 187	5.7
Union -----	400	7.1	2 103	6.7	444	6.2	1 789	11.0	612	3.8	1 839	6.2
Van Buren -----	514	6.1	2 287	8.4	497	6.1	1 471	8.0	714	3.3	1 741	6.6
Wapello -----	522	5.5	2 680	8.7	471	6.2	1 563	6.8	736	2.2	1 587	6.7
Warren -----	839	4.6	3 165	4.7	873	4.0	3 025	6.7	1 152	2.1	2 855	4.6
Washington -----	778	3.7	5 208	4.8	862	3.8	4 454	5.2	1 050	1.5	4 124	3.7
Wayne -----	576	4.1	3 217	5.7	523	5.5	1 597	7.1	640	3.2	1 732	5.0
Webster -----	880	3.2	7 804	4.4	885	3.5	6 363	4.8	1 043	1.3	4 497	3.8
Winnebago -----	520	3.7	4 790	5.7	532	3.6	3 540	6.0	644	1.1	3 544	4.1
Winneshiek -----	1 101	3.8	5 748	4.3	1 143	3.7	3 355	4.5	1 428	2.1	4 834	4.3
Woodbury -----	949	3.3	9 157	5.4	950	3.7	6 622	5.1	1 189	1.7	4 634	3.9
Worth -----	482	3.9	4 791	3.2	487	4.4	3 335	4.2	621	1.9	3 561	3.7
Wright -----	699	2.5	7 597	5.1	716	2.4	5 437	4.0	794	1.3	4 237	5.7
Geographic area	Farm production expenses ¹ —Con.											
	Electricity				Hired farm labor				Contract labor			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Iowa -----	81 860	1.1	133 955	.9	36 520	1.3	259 210	.9	7 275	2.7	19 833	3.3
Adair -----	723	4.0	1 077	5.7	259	13.6	1 391	10.0	103	24.1	356	38.4
Adams -----	563	4.0	744	8.7	159	17.2	729	15.4	40	34.5	81	20.2
Allamakee -----	942	2.4	1 817	3.6	421	8.7	2 100	10.4	75	25.8	126	28.5
Appanoose -----	637	5.3	348	8.1	187	16.4	476	11.4	38	40.0	58	44.5
Audubon -----	684	2.6	1 348	3.5	245	10.2	1 849	2.3	92	21.3	278	20.3
Benton -----	1 184	2.5	1 821	3.5	535	7.1	3 229	4.8	137	17.3	286	20.7
Black Hawk -----	928	3.1	1 339	4.2	398	8.1	4 533	9.2	90	22.9	171	10.1
Boone -----	714	4.0	1 037	4.1	370	9.2	2 973	3.1	61	28.3	88	14.5
Bremer -----	833	3.5	1 400	7.1	443	7.5	2 235	10.9	71	27.1	110	42.2
Buchanan -----	968	3.5	1 840	3.7	552	7.0	4 499	9.3	74	27.8	133	22.6
Buena Vista -----	803	3.3	1 659	2.9	435	7.4	3 562	1.7	50	27.6	178	7.4
Butler -----	1 005	2.9	1 656	3.1	435	7.6	2 894	8.6	86	19.7	528	36.4
Calhoun -----	788	3.6	1 108	3.8	367	7.8	1 525	5.9	67	19.2	129	20.5
Carroll -----	1 070	2.4	2 064	3.2	537	6.9	2 722	5.4	129	18.4	280	27.2
Cass -----	792	2.8	1 232	5.2	335	10.5	2 181	10.5	77	26.7	98	23.0
Cedar -----	971	2.4	1 888	4.5	360	10.4	3 538	7.9	75	23.7	284	23.0
Cerro Gordo -----	662	4.0	1 163	3.5	338	8.3	3 564	10.2	47	23.4	83	18.3
Cherokee -----	799	3.8	1 580	4.4	370	8.7	2 733	11.9	77	21.3	330	18.3
Chickasaw -----	866	2.8	1 422	4.1	432	7.3	2 226	6.1	49	29.6	174	7.3
Clarke -----	555	4.9	468	7.2	132	17.7	560	6.8	41	31.8	91	54.8
Clay -----	657	3.8	1 184	4.7	351	8.6	3 764	11.2	65	26.7	439	21.1
Clayton -----	1 325	2.3	2 909	3.2	739	6.0	4 345	8.0	120	20.7	237	18.3
Clinton -----	1 171	2.6	1 847	6.1	569	7.3	3 178	6.4	71	22.7	100	34.9
Crawford -----	1 023	3.5	1 701	4.4	492	8.5	2 613	11.9	78	20.1	301	18.5
Dallas -----	749	3.9	1 011	4.2	333	9.3	3 790	2.3	88	23.3	537	6.0
Davis -----	638	5.8	698	7.2	276	11.8	1 014	13.4	53	32.0	65	33.5
Decatur -----	429	5.8	432	7.5	160	16.1	1 329	8.2	39	37.3	101	19.9
Delaware -----	1 227	2.5	3 248	2.4	615	6.3	3 714	6.5	113	21.6	265	15.7
Des Moines -----	555	4.3	594	7.9	207	11.4	1 222	10.0	29	36.6	80	43.9
Dickinson -----	500	2.5	729	5.3	205	12.4	1 621	13.2	21	39.7	87	58.1
Dubuque -----	1 545	1.9	3 554	3.6	703	6.7	3 625	6.4	90	21.6	166	20.9
Emmet -----	457	3.5	737	4.7	274	9.6	1 528	18.8	46	33.0	164	51.1
Fayette -----	1 250	2.4	2 710	3.8	660	5.7	5 104	6.8	113	18.7	366	18.0
Floyd -----	712	3.8	1 144	3.6	357	8.7	3 206	2.6	82	24.8	129	27.5
Franklin -----	811	3.3	1 530	3.7	317	9.2	3 029	14.2	34	23.7	370	1.0
Fremont -----	508	4.1	800	6.3	282	10.5	2 787	11.4	90	24.1	233	43.6
Greene -----	726	3.5	1 052	5.1	388	8.3	2 797	6.5	118	18.4	450	35.2
Grundy -----	754	3.4	1 161	4.0	328	9.4	3 523	5.7	87	21.2	149	14.3
Guthrie -----	764	3.4	1 547	3.7	367	10.1	2 963	7.5	52	31.9	89	40.2
Hamilton -----	758	3.0	1 747	3.6	397	8.2	5 586	.9	46	24.8	367	2.8
Hancock -----	863	2.4	1 611	4.8	464	6.8	2 061	10.1	63	26.5	125	17.9
Hardin -----	835	3.2	1 746	2.9	411	8.1	3 151	8.7	92	24.4	392	30.5
Harrison -----	765	3.3	1 487	4.1	360	8.8	2 028	6.3	112	19.6	289	20.1
Henry -----	622	4.5	638	4.6	221	12.5	1 485	4.7	75	21.5	93	11.4
Howard -----	694	4.5	1 144	4.7	335	10.5	1 857	6.4	60	29.9	170	16.1
Humboldt -----	606	3.6	816	4.2	318	8.9	1 398	2.5	61	27.5	75	24.4
Ida -----	595	5.8	1 253	6.7	312	9.5	1 639	9.3	35	25.7	95	23.0
Iowa -----	887	2.8	1 485	3.9	263	11.4	3 354	6.2	53	29.3	61	15.1
Jackson -----	1 205	2.7	1 905	5.1	478	8.4	2 504	12.6	40	35.1	41	38.0

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-19

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Electricity				Hired farm labor				Contract labor			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Jasper -----	1 105	3.2	1 697	3.9	449	8.4	3 306	4.4	117	22.5	318	26.2
Jefferson -----	594	5.7	626	4.8	226	11.0	1 312	7.2	38	41.2	90	11.1
Johnson -----	1 061	2.7	1 410	5.3	459	7.9	2 365	7.3	62	27.1	150	26.6
Jones -----	974	3.1	1 660	3.5	336	10.2	2 869	5.8	54	22.6	144	5.5
Keokuk -----	794	3.5	1 129	4.6	287	10.1	1 791	12.8	61	26.3	116	13.7
Kossuth -----	1 420	2.4	2 572	3.5	775	6.3	4 939	6.3	118	19.0	267	23.1
Lee -----	649	5.0	1 032	7.1	246	14.0	2 533	5.9	82	26.6	288	42.0
Linn -----	1 332	2.5	1 559	3.4	352	9.6	2 926	9.1	147	20.5	416	21.3
Louisa -----	497	3.2	662	7.2	209	11.2	1 333	16.9	68	23.3	94	21.4
Lucas -----	513	5.1	515	10.2	151	16.2	604	3.2	60	26.5	122	68.4
Lyon -----	1 129	2.3	1 834	4.9	463	10.2	3 928	6.1	103	25.2	190	11.1
Madison -----	862	3.5	1 277	6.5	288	11.3	2 412	4.4	85	29.4	163	20.6
Mahaska -----	911	3.1	1 761	3.6	319	9.2	3 066	5.9	89	22.6	314	36.6
Marion -----	810	4.1	1 069	7.0	325	12.9	1 717	12.6	83	30.3	171	9.9
Marshall -----	785	3.2	1 281	4.8	421	6.9	3 878	7.7	83	22.1	284	10.9
Mills -----	477	3.6	769	4.8	232	9.1	3 228	12.7	50	24.2	98	11.9
Mitchell -----	732	2.9	1 451	3.3	363	8.4	2 891	6.9	80	22.4	358	7.0
Monona -----	715	3.3	1 055	4.9	289	10.4	2 310	6.5	182	15.1	327	23.2
Monroe -----	519	5.8	442	10.7	198	14.5	893	14.7	45	38.0	73	34.3
Montgomery -----	558	2.6	866	3.7	181	13.5	3 563	6.3	44	31.8	212	9.8
Muscatine -----	731	2.3	960	5.6	227	12.4	1 793	6.5	61	26.7	76	21.0
O'Brien -----	1 050	2.3	2 159	4.7	491	8.4	2 968	10.0	40	26.0	187	5.3
Oscceola -----	665	3.7	1 065	4.2	301	10.1	2 313	10.9	44	36.8	126	29.2
Page -----	750	3.9	964	5.9	366	9.0	4 621	6.4	85	24.2	125	21.7
Palo Alto -----	771	2.6	1 337	5.6	478	7.0	1 984	11.1	40	32.4	92	12.9
Plymouth -----	1 418	2.7	2 696	3.0	690	6.1	4 076	7.4	121	16.3	417	30.1
Pocahontas -----	798	3.2	1 250	5.0	385	8.1	2 200	6.3	30	29.0	102	9.4
Polk -----	618	5.0	646	6.4	248	11.4	2 613	3.6	57	27.8	126	34.4
Pottawattamie -----	1 259	2.6	2 268	3.6	505	7.5	4 323	4.0	97	19.3	193	13.5
Poweshiek -----	823	3.3	982	5.5	268	11.4	1 436	6.7	93	25.0	167	20.1
Ringgold -----	494	5.7	734	7.2	212	12.3	642	17.8	58	27.5	134	28.2
Sac -----	849	3.3	1 579	3.9	429	8.5	3 377	5.2	72	25.0	185	26.8
Scott -----	782	3.1	1 256	5.0	320	10.8	3 040	7.9	81	22.1	416	9.6
Shelby -----	972	2.8	1 836	3.6	413	7.7	2 604	6.9	55	23.4	145	17.9
Sioux -----	1 801	2.3	3 709	3.0	966	5.2	7 258	4.3	142	14.6	485	17.9
Story -----	895	2.7	1 412	3.8	396	8.7	3 757	3.8	93	19.4	266	7.5
Tama -----	1 053	2.9	1 645	4.4	408	9.4	2 750	4.7	113	22.1	195	22.0
Taylor -----	604	4.9	802	9.2	271	13.3	1 678	13.2	54	32.0	83	29.6
Union -----	536	5.6	667	8.5	247	12.0	1 526	11.2	49	35.2	245	67.4
Van Buren -----	559	5.8	543	6.1	251	11.9	928	5.2	20	40.1	56	29.9
Wapello -----	515	6.2	364	8.8	151	15.3	808	2.7	48	33.5	43	19.3
Warren -----	942	3.5	977	6.4	379	9.8	1 649	5.8	105	23.5	233	24.9
Washington -----	932	2.8	1 594	3.8	431	7.7	3 748	4.6	70	22.8	340	21.5
Wayne -----	531	5.3	457	7.2	221	12.3	586	18.1	49	32.2	40	12.6
Webster -----	876	3.4	1 225	4.3	437	7.6	3 573	3.3	50	29.4	93	7.1
Winnebago -----	578	3.4	839	5.0	245	10.8	1 144	12.5	60	26.2	93	30.0
Winneshiek -----	1 292	3.0	2 379	3.6	618	7.3	3 346	12.4	82	24.1	119	19.4
Woodbury -----	971	3.9	1 698	5.2	493	8.7	3 270	10.0	155	19.6	511	24.2
Worth -----	532	4.3	724	3.6	211	11.7	1 022	6.9	32	22.2	78	8.9
Wright -----	708	3.1	1 094	4.8	401	7.7	2 579	5.0	63	20.3	377	66.3
Geographic area	Farm production expenses ¹ —Con.											
	Repair and maintenance				Customwork, machine hire, and rental of machinery and equipment				Interest expense			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Iowa -----	86 413	1.1	485 479	1.0	48 890	1.3	141 975	1.8	61 909	1.2	593 994	1.0
Adair -----	797	3.3	4 541	6.0	445	9.4	1 330	20.5	586	6.5	5 182	8.7
Adams -----	555	4.5	2 313	7.8	311	10.7	664	13.9	384	8.7	2 795	9.0
Allamakee -----	896	2.9	5 290	4.7	546	6.5	1 828	25.6	687	5.0	6 458	7.8
Appanoose -----	731	3.8	2 079	8.3	317	11.4	523	21.4	407	8.4	2 137	12.5
Audubon -----	706	2.3	4 502	2.9	427	6.9	985	9.5	519	5.3	5 950	4.7
Benton -----	1 208	2.2	6 896	4.0	683	6.2	1 570	8.3	926	4.1	8 286	6.0
Black Hawk -----	1 006	2.5	5 745	4.0	520	7.3	1 618	11.4	636	5.8	7 019	7.2
Boone -----	808	3.0	4 436	6.0	468	6.9	1 861	16.5	553	6.0	5 148	7.3
Bremer -----	967	2.2	4 808	4.6	497	7.2	1 310	10.7	734	4.8	6 939	5.8
Buchanan -----	1 100	2.0	6 556	5.3	603	7.0	1 472	9.5	754	5.0	7 753	6.3
Buena Vista -----	862	2.7	6 409	3.9	521	6.1	2 077	12.5	634	5.0	6 616	6.4
Butler -----	1 044	2.2	5 005	4.0	625	5.3	1 281	7.3	782	4.5	7 783	4.7
Calhoun -----	824	2.9	4 960	4.6	495	6.0	1 138	15.2	693	4.6	6 835	5.9
Carroll -----	1 111	2.0	6 971	3.7	592	6.5	1 731	9.4	836	4.1	7 213	5.2
Cass -----	817	2.8	4 755	5.5	540	6.5	1 308	10.7	637	5.0	5 200	5.6
Cedar -----	964	2.6	5 890	4.9	583	7.1	1 846	11.6	767	4.3	8 348	7.1
Cerro Gordo -----	746	2.5	4 774	4.0	486	6.3	1 987	12.3	526	5.7	5 154	7.2
Cherokee -----	885	3.1	5 872	5.3	506	7.1	1 320	10.4	635	6.0	6 756	5.7
Chickasaw -----	913	2.5	5 179	6.0	488	7.6	1 845	13.7	670	5.5	7 011	5.7

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Repair and maintenance				Customwork, machine hire, and rental of machinery and equipment				Interest expense			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Clarke -----	560	5.2	1 760	5.6	225	14.1	308	14.4	367	10.0	2 189	10.6
Clay -----	689	3.2	4 543	5.1	431	7.1	1 880	16.3	566	5.2	6 685	8.0
Clayton -----	1 464	2.1	8 298	3.6	919	4.7	2 625	18.5	1 079	3.9	10 826	5.7
Clinton -----	1 226	2.5	6 037	4.7	704	5.7	1 875	9.3	921	4.6	9 448	5.2
Crawford -----	1 126	2.8	5 541	5.1	632	7.0	1 480	11.6	864	4.6	7 932	5.6
Dallas -----	805	3.1	4 359	5.2	410	8.2	1 215	11.6	519	6.5	5 058	6.9
Davis -----	785	4.3	2 528	7.2	358	10.2	508	16.9	464	7.5	2 606	10.3
Decatur -----	520	3.5	1 961	5.9	258	11.5	482	21.2	359	8.0	2 184	9.7
Delaware -----	1 250	2.3	9 206	3.6	773	5.0	1 964	9.2	938	4.3	11 660	4.3
Des Moines -----	627	3.1	3 161	5.8	306	9.2	811	23.2	370	8.3	3 255	8.9
Dickinson -----	499	2.7	3 035	4.6	289	9.8	1 345	20.7	342	7.7	3 955	9.6
Dubuque -----	1 541	2.1	9 855	4.0	927	5.1	2 377	8.6	1 011	4.8	9 517	5.0
Emmet -----	502	3.4	2 823	6.2	239	12.2	714	25.7	340	7.5	3 178	9.2
Fayette -----	1 259	2.2	8 137	3.6	779	5.7	2 127	9.3	885	4.7	9 087	6.1
Floyd -----	761	3.0	4 735	5.2	422	8.1	1 004	10.3	564	5.2	5 314	6.9
Franklin -----	841	2.9	4 976	4.7	443	7.6	1 668	11.6	701	4.5	7 000	5.4
Fremont -----	530	3.3	4 260	5.8	342	8.2	1 485	13.9	374	6.9	4 788	5.8
Greene -----	747	3.2	5 334	6.8	461	7.1	1 627	12.1	614	4.8	5 767	4.5
Grundy -----	776	2.5	5 064	4.2	515	6.3	2 598	11.3	608	4.6	7 611	4.9
Guthrie -----	844	3.2	4 639	6.2	525	7.2	1 084	12.4	556	6.4	5 173	7.2
Hamilton -----	789	2.5	5 696	4.8	418	8.8	1 435	11.3	659	4.1	8 151	7.9
Hancock -----	890	2.1	5 604	6.7	467	7.8	1 459	22.7	620	4.9	6 592	6.0
Hardin -----	889	2.8	5 724	3.1	448	7.3	2 069	8.9	672	4.9	7 384	5.1
Harrison -----	819	3.0	5 219	5.2	349	9.3	1 605	9.7	644	4.4	6 365	4.7
Henry -----	682	3.4	3 077	5.6	391	9.0	1 176	18.3	474	6.7	4 678	7.4
Howard -----	793	3.9	4 760	5.9	508	7.0	1 246	10.3	676	5.5	5 214	5.8
Humboldt -----	654	1.8	3 988	5.3	318	8.9	879	14.0	466	5.8	4 737	7.0
Ida -----	714	2.0	3 772	4.4	369	9.2	1 327	10.9	496	6.9	5 123	8.5
Iowa -----	890	2.4	4 886	4.7	532	6.6	1 502	9.3	633	5.7	5 920	5.2
Jackson -----	1 171	2.9	5 120	4.5	587	7.1	1 236	8.7	888	4.8	8 440	7.3
Jasper -----	1 202	2.4	6 300	4.5	612	7.0	1 516	8.1	789	5.1	8 430	6.2
Jefferson -----	654	3.8	2 966	6.1	324	10.0	750	13.9	464	7.6	3 015	9.3
Johnson -----	1 071	2.8	5 060	6.1	626	6.3	1 316	10.3	792	4.8	7 180	6.6
Jones -----	1 033	2.6	6 131	4.3	612	6.2	1 619	14.4	728	5.2	8 543	6.5
Keokuk -----	811	3.4	4 408	6.6	399	8.3	1 272	17.6	534	6.3	5 014	7.2
Kossuth -----	1 462	2.0	10 300	3.8	795	6.1	2 761	18.8	1 152	3.7	12 539	4.6
Lee -----	713	4.6	4 500	5.9	347	11.4	911	12.4	501	7.6	5 034	8.2
Linn -----	1 315	2.8	5 849	4.3	736	6.8	2 222	16.1	796	6.2	6 964	6.1
Louisa -----	525	2.3	2 693	6.2	310	7.0	849	15.8	426	5.0	3 754	7.7
Lucas -----	582	3.4	2 074	10.4	266	9.9	540	25.4	317	9.4	2 254	10.9
Lyon -----	1 122	2.6	5 878	5.8	591	6.9	1 628	13.6	828	5.3	7 798	7.4
Madison -----	932	2.9	3 653	5.9	542	6.0	1 162	10.1	523	7.7	4 301	7.6
Mahaska -----	917	3.0	4 817	4.6	562	6.7	1 596	13.6	687	5.4	5 975	5.9
Marion -----	863	3.6	3 481	7.3	568	6.5	1 708	23.9	570	6.7	4 271	10.2
Marshall -----	850	2.5	5 434	3.4	518	6.5	1 469	10.0	617	4.8	5 989	7.3
Mills -----	485	4.1	3 142	6.8	334	7.0	1 002	11.4	361	6.4	3 629	6.1
Mitchell -----	761	2.5	5 445	3.5	477	7.2	1 593	13.3	639	4.6	6 557	6.1
Monona -----	720	3.4	4 310	5.7	444	8.0	1 606	13.6	533	6.2	4 612	8.1
Monroe -----	574	4.3	1 866	6.6	271	11.4	330	21.2	395	8.5	2 590	10.9
Montgomery -----	535	3.6	3 402	4.6	280	9.9	936	13.4	341	7.8	3 114	8.3
Muscatine -----	693	3.2	3 631	5.2	345	8.7	759	17.5	461	6.8	4 781	7.8
O'Brien -----	1 046	2.4	5 972	4.7	571	7.4	1 546	11.5	781	4.9	7 113	6.3
Osceola -----	627	4.3	3 972	6.2	353	9.3	1 140	13.7	483	6.8	4 421	8.2
Page -----	826	2.7	4 235	12.0	516	6.6	1 278	10.2	553	5.7	5 120	7.5
Palo Alto -----	787	2.2	4 389	4.9	443	7.2	1 219	15.1	577	5.0	7 559	7.8
Plymouth -----	1 460	2.2	9 918	3.2	902	4.8	2 397	7.9	1 012	4.4	10 153	4.8
Pocahontas -----	845	2.7	4 950	5.1	415	8.4	1 754	21.8	551	6.0	6 037	6.9
Polk -----	703	3.7	3 474	4.3	388	8.4	764	18.3	449	7.1	4 367	10.0
Pottawattamie -----	1 319	2.3	7 616	4.0	857	5.1	3 230	9.0	963	4.6	9 031	5.8
Poweshiek -----	877	2.5	5 232	10.5	361	11.2	802	17.5	662	4.5	6 257	6.2
Ringgold -----	599	3.9	2 610	9.8	243	11.4	516	17.8	402	8.0	2 673	9.1
Sac -----	876	3.0	6 234	4.6	523	6.6	2 039	18.4	672	5.4	6 766	5.1
Scott -----	827	2.5	4 523	3.9	388	8.6	1 048	11.1	548	6.0	6 366	5.8
Shelby -----	986	2.7	6 411	4.9	536	7.4	1 147	11.6	744	4.3	6 468	4.9
Sioux -----	1 820	2.1	12 230	3.3	1 241	4.2	3 415	5.3	1 486	3.4	15 546	3.2
Story -----	871	3.0	4 592	5.2	539	7.2	2 877	13.6	611	5.3	6 150	6.8
Tama -----	1 170	2.1	6 775	4.6	781	5.2	2 172	11.1	771	5.4	7 141	8.2
Taylor -----	654	4.0	3 190	8.6	403	8.4	1 074	12.4	454	6.3	3 401	8.2
Union -----	595	3.2	2 682	6.8	279	11.5	667	9.9	385	8.4	3 097	8.1
Van Buren -----	668	4.3	2 274	7.9	346	10.0	496	11.5	419	7.9	2 829	8.1
Wapello -----	688	3.2	1 899	5.8	305	10.4	666	12.4	402	7.3	2 305	8.1
Warren -----	1 022	3.1	3 972	5.7	630	5.7	1 624	24.0	612	6.6	4 694	11.0
Washington -----	971	2.5	5 902	3.7	528	7.0	1 416	10.3	708	4.8	6 342	5.5
Wayne -----	612	3.5	2 155	6.5	342	9.7	1 016	11.5	426	6.7	2 723	8.9
Webster -----	924	2.7	6 003	5.2	496	7.8	1 462	10.1	687	5.1	5 248	5.3
Winnebago -----	617	2.3	3 818	6.5	337	8.8	1 177	19.9	446	5.7	5 228	7.1
Winneshiek -----	1 251	3.3	6 279	3.8	887	5.3	2 117	11.5	961	5.4	7 799	5.9
Woodbury -----	1 088	2.8	6 065	5.1	650	6.8	2 278	11.6	677	6.4	6 735	6.9
Worth -----	567	3.5	2 969	3.9	295	9.4	611	11.9	417	5.5	4 647	5.2
Wright -----	714	3.0	4 724	5.9	378	8.4	1 674	17.5	560	5.1	7 015	8.5

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-21

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Iowa -----	38 795	1.3	677 490	1.1	81 786	1.1	240 832	1.1	93 438	1.1	615 377	.9
Adair -----	292	10.8	3 168	9.8	781	3.9	2 515	5.3	861	2.4	5 495	5.2
Adams -----	230	12.4	1 967	13.5	606	3.0	1 200	8.2	619	2.4	3 184	12.7
Allamakee -----	349	10.2	3 841	10.5	927	2.6	2 684	4.9	977	1.7	7 428	5.5
Appanoose -----	154	16.9	527	17.5	773	3.3	1 335	6.1	791	3.2	2 303	11.7
Audubon -----	349	7.2	6 397	7.2	661	3.1	2 383	5.6	725	1.8	4 845	3.6
Benton -----	625	6.2	12 751	6.1	1 104	3.1	3 494	4.9	1 272	1.6	9 547	4.6
Black Hawk -----	484	6.5	13 600	7.1	923	3.0	3 294	5.9	1 099	.9	6 751	4.5
Boone -----	324	10.1	6 473	7.4	755	3.8	2 431	10.8	896	1.5	5 919	3.3
Bremer -----	562	6.7	8 991	6.5	889	3.5	2 551	6.5	1 020	1.9	5 947	4.7
Buchanan -----	532	7.2	10 145	5.9	995	3.4	3 452	6.6	1 162	1.4	7 748	3.5
Buena Vista -----	444	7.1	6 696	9.3	762	4.1	2 654	10.3	948	1.3	9 004	2.9
Butler -----	557	5.5	10 678	4.6	942	3.2	2 543	5.8	1 120	1.5	6 196	5.5
Calhoun -----	381	8.2	6 043	8.3	751	3.7	2 318	7.6	899	1.2	6 758	5.9
Carroll -----	635	6.0	8 890	5.8	949	3.6	2 628	5.5	1 161	1.4	9 079	3.3
Cass -----	387	7.9	6 102	8.4	704	4.8	2 400	5.3	867	1.9	5 832	7.2
Cedar -----	468	7.8	10 759	7.3	910	3.9	3 398	5.4	1 060	1.3	7 787	5.2
Cerro Gordo -----	433	6.4	11 167	6.7	691	3.4	2 526	7.1	797	1.7	6 600	3.9
Cherokee -----	552	6.7	8 375	7.4	772	4.1	2 151	5.5	976	1.1	8 023	5.4
Chickasaw -----	403	8.4	6 516	6.9	917	2.5	2 835	4.7	963	2.0	6 057	4.3
Clarke -----	185	14.9	1 579	14.2	580	4.7	1 330	6.9	635	3.0	2 279	8.7
Clay -----	338	9.2	6 113	9.0	671	3.7	1 986	8.3	763	1.4	7 033	6.6
Clayton -----	500	7.5	5 654	8.3	1 467	2.0	4 737	3.6	1 573	1.1	11 788	5.8
Clinton -----	609	6.4	10 774	6.4	1 123	3.3	3 159	6.6	1 326	1.5	7 501	5.1
Crawford -----	565	7.8	9 128	8.1	1 072	3.5	3 296	6.0	1 208	1.8	7 855	4.6
Dallas -----	343	7.6	5 671	8.3	809	3.3	2 634	6.0	904	2.0	5 082	4.0
Davis -----	184	14.6	795	12.1	868	3.2	1 975	6.8	844	3.5	3 784	7.8
Decatur -----	182	13.3	1 012	15.9	588	2.9	1 460	8.0	596	2.6	2 583	9.6
Delaware -----	540	7.0	7 867	8.3	1 114	3.0	4 173	5.1	1 351	1.3	12 693	3.8
Des Moines -----	197	11.4	4 592	11.7	607	3.2	1 803	8.2	642	2.6	3 030	5.5
Dickinson -----	221	12.1	3 405	10.1	463	5.3	1 213	9.0	548	1.5	3 479	5.5
Dubuque -----	524	7.7	6 819	8.8	1 393	2.9	4 365	4.4	1 630	1.4	12 232	4.4
Emmet -----	268	10.5	6 303	15.0	418	6.4	1 282	10.6	537	1.7	2 585	8.0
Fayette -----	582	6.4	9 596	6.7	1 177	2.9	4 181	4.6	1 370	1.5	10 038	4.5
Floyd -----	397	7.5	8 043	8.9	680	4.6	2 312	7.0	852	1.8	5 770	5.7
Franklin -----	496	6.2	11 764	6.5	764	3.8	2 607	7.7	929	1.1	7 410	3.8
Fremont -----	171	15.9	2 569	13.7	471	5.5	1 644	8.0	586	1.8	4 552	5.7
Greene -----	343	9.2	6 033	8.4	709	3.8	2 332	8.0	834	1.4	5 976	5.8
Grundy -----	434	6.9	13 605	5.3	729	3.3	2 098	5.8	837	1.3	6 467	4.4
Guthrie -----	299	10.6	3 756	11.1	803	3.6	2 247	7.8	918	1.7	5 241	5.8
Hamilton -----	468	6.8	11 091	8.1	734	3.4	2 221	6.7	849	1.7	9 025	3.9
Hancock -----	475	6.8	11 692	9.9	727	4.3	2 052	11.0	933	1.1	5 938	5.1
Hardin -----	540	6.2	13 321	6.2	762	4.3	2 287	5.2	972	1.3	8 170	2.9
Harrison -----	325	8.5	5 144	8.7	822	3.0	2 580	5.6	898	2.0	6 303	5.8
Henry -----	269	10.2	3 722	10.0	720	3.1	2 109	6.5	787	1.5	3 711	4.5
Howard -----	361	10.2	5 690	9.2	830	2.5	2 358	5.9	869	2.0	4 997	5.4
Humboldt -----	327	8.9	8 234	9.2	469	6.1	1 702	9.6	670	1.4	4 725	5.6
Ida -----	371	7.1	6 810	6.5	606	4.3	1 690	6.6	728	1.7	5 462	6.0
Iowa -----	378	7.7	5 864	5.7	864	2.9	2 769	5.6	967	1.3	5 928	4.8
Jackson -----	402	9.0	4 493	9.6	1 223	2.6	3 301	5.1	1 290	1.7	7 694	9.0
Jasper -----	440	6.8	6 633	9.2	1 173	2.3	4 140	4.7	1 265	1.8	7 174	4.8
Jefferson -----	145	19.7	2 481	13.0	624	5.2	1 786	10.1	701	2.8	3 511	6.2
Johnson -----	413	8.8	5 162	7.7	1 084	2.9	2 885	4.9	1 176	1.8	6 220	5.9
Jones -----	464	7.9	7 277	9.0	940	3.2	3 038	5.5	1 052	2.0	6 742	3.5
Keokuk -----	294	9.1	5 141	10.1	872	2.3	2 591	8.0	912	1.9	5 574	10.4
Kossuth -----	962	4.5	21 245	5.9	1 243	3.5	4 318	5.5	1 564	1.2	12 051	4.7
Lee -----	302	10.0	4 125	12.4	822	2.4	2 635	5.9	816	2.1	4 721	4.6
Linn -----	557	6.8	9 481	7.8	1 289	3.0	3 851	5.5	1 473	1.6	6 316	7.0
Louisa -----	255	8.0	4 363	9.8	443	4.4	1 503	5.8	534	2.3	3 088	6.1
Lucas -----	125	18.0	873	15.4	590	3.2	1 334	9.5	601	3.1	2 398	10.8
Lyon -----	610	6.7	9 318	9.8	997	3.9	1 924	7.0	1 175	2.0	10 366	4.8
Madison -----	305	10.3	3 013	13.6	910	3.3	2 606	7.1	966	2.4	5 460	5.1
Mahaska -----	406	7.3	6 596	7.5	939	3.1	3 343	4.6	996	2.3	6 757	3.4
Marion -----	303	12.5	3 506	28.3	933	2.5	2 187	6.3	953	2.2	4 202	6.9
Marshall -----	438	7.0	11 057	8.0	718	4.1	2 457	6.5	928	1.2	6 874	6.3
Mills -----	210	8.9	3 684	10.1	466	3.9	1 448	7.0	523	2.4	4 882	9.2
Mitchell -----	379	7.2	8 065	6.0	684	3.4	2 054	5.1	804	1.7	6 972	4.2
Monona -----	276	10.1	4 874	9.0	653	4.6	1 865	7.8	807	1.8	4 933	4.1
Monroe -----	142	17.5	413	13.5	630	3.2	1 324	6.9	631	2.7	2 207	8.2
Montgomery -----	167	13.2	2 450	22.2	562	3.0	1 889	7.7	601	1.8	4 444	3.8
Muscatine -----	308	9.9	6 087	10.2	654	3.9	2 179	6.2	774	2.1	3 468	5.7
O'Brien -----	659	5.2	11 792	6.4	942	3.9	2 100	5.8	1 098	1.5	8 596	3.9
Oscceola -----	349	7.5	6 881	9.3	562	5.9	1 453	7.8	719	2.1	5 792	4.8
Page -----	279	10.6	2 241	13.9	786	3.4	1 743	7.6	896	1.8	6 413	8.5
Palo Alto -----	358	9.4	6 951	10.3	676	4.3	2 516	7.8	840	1.1	4 854	5.2
Plymouth -----	816	4.9	13 707	4.2	1 326	3.2	3 358	4.6	1 572	1.7	12 123	3.3
Pocahontas -----	490	6.6	9 078	7.8	677	4.7	1 707	8.3	899	1.6	6 493	5.8
Polk -----	230	9.8	4 841	8.8	734	3.2	1 929	6.2	773	2.8	3 981	3.9
Pottawattamie -----	592	7.3	10 679	6.8	1 149	3.6	3 567	5.6	1 400	1.5	9 539	3.2
Poweshiek -----	345	9.0	5 363	9.6	779	3.9	2 262	7.9	903	2.0	5 607	5.2

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Ringgold -----	201	15.3	1 281	9.2	632	3.0	1 517	7.2	619	2.9	3 367	8.2
Sac -----	516	6.5	11 060	7.3	791	3.9	2 320	6.2	968	1.2	7 848	3.6
Scott -----	488	6.5	11 234	7.7	701	4.7	2 302	6.4	881	2.0	5 659	5.5
Shelby -----	588	5.7	8 870	6.0	891	3.6	2 805	6.1	1 056	1.8	7 653	4.4
Sioux -----	1 030	5.0	15 944	4.7	1 718	2.7	3 578	4.9	1 948	1.6	16 707	2.4
Story -----	417	8.2	6 936	8.8	826	3.2	2 437	7.6	967	1.4	6 767	6.2
Tama -----	584	6.9	12 954	9.1	1 139	2.6	3 296	6.6	1 240	1.7	7 368	4.9
Taylor -----	264	12.1	2 949	12.6	643	3.7	1 546	7.0	720	2.4	4 104	9.5
Union -----	160	15.1	1 751	9.0	622	3.4	1 583	7.5	643	2.6	3 352	8.8
Van Buren -----	130	17.2	1 336	17.5	717	3.4	1 600	6.9	728	3.4	2 535	6.1
Wapello -----	178	15.1	2 219	14.5	668	3.8	1 348	8.1	658	3.6	2 484	13.0
Warren -----	263	11.7	2 523	14.5	1 111	2.5	2 513	6.5	1 109	2.2	3 833	3.9
Washington -----	357	9.2	6 087	9.4	879	3.3	2 984	5.4	1 042	1.6	7 790	4.1
Wayne -----	165	14.4	1 772	19.6	687	2.6	1 535	6.6	702	2.6	3 037	8.9
Webster -----	427	7.9	7 488	7.9	852	3.7	2 329	5.8	1 043	1.3	8 255	3.1
Winnebago -----	335	8.0	9 117	9.2	533	4.9	1 461	6.3	626	1.6	3 407	5.5
Winneshiek -----	491	8.9	5 533	10.6	1 275	3.3	3 681	4.9	1 461	2.0	8 748	4.2
Woodbury -----	379	9.4	7 813	10.1	1 009	4.1	3 316	8.0	1 215	1.7	6 655	3.9
Worth -----	326	7.4	8 467	5.4	545	3.9	1 939	7.2	614	2.0	4 421	7.6
Wright -----	422	7.3	10 554	7.8	615	4.5	2 054	7.8	787	1.5	5 796	4.7
Geographic area	Net cash return from agricultural sales for the farm unit (see text) ¹				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
	Iowa -----	96 541	1.1	2 193 209	1.0	88 224	1.1	27 195 676	.9	84 009	1.1	22 826 308
Adair -----	892	1.3	15 587	8.8	818	1.2	273 975	1.1	759	1.3	201 988	1.1
Adams -----	643	1.4	9 813	16.3	590	1.4	188 706	1.4	544	1.4	124 077	1.4
Allamakee -----	999	1.4	18 512	10.1	903	1.3	198 075	1.2	846	1.4	143 265	1.2
Appanoose -----	827	2.6	9 007	14.9	756	2.7	179 944	3.0	699	2.8	96 528	3.0
Audubon -----	740	1.3	17 040	5.9	673	1.2	240 144	1.0	635	1.2	197 846	1.0
Benton -----	1 325	1.0	25 507	7.2	1 203	1.0	388 123	.9	1 158	1.0	337 633	.9
Black Hawk -----	1 110	.8	18 195	7.4	1 012	.7	277 241	.7	977	.8	257 277	.7
Boone -----	922	.9	30 019	5.5	862	.8	300 885	.8	831	.8	278 180	.8
Bremer -----	1 058	1.2	19 713	6.6	962	1.2	215 294	1.1	916	1.2	195 242	1.1
Buchanan -----	1 194	1.0	24 528	5.4	1 101	1.1	304 719	.9	1 054	1.1	274 972	.9
Buena Vista -----	973	.9	39 631	4.1	872	.8	314 590	.8	857	.8	294 236	.8
Butler -----	1 146	.8	23 683	6.1	1 019	.8	284 975	.8	962	.8	254 452	.8
Calhoun -----	899	1.2	37 741	3.2	833	1.1	325 486	1.0	806	1.1	304 854	.9
Carroll -----	1 196	1.0	44 026	4.1	1 087	1.0	332 327	.9	1 062	1.0	300 794	.9
Cass -----	906	1.2	22 307	6.0	828	1.1	305 308	1.0	790	1.1	243 861	1.0
Cedar -----	1 100	1.0	16 465	11.1	1 006	1.0	304 103	1.0	956	1.0	269 143	1.0
Cerro Gordo -----	821	1.0	21 717	7.4	765	.9	290 898	.9	737	.9	265 436	.9
Cherokee -----	978	1.1	33 670	6.7	890	1.1	297 605	.9	875	1.1	262 066	.9
Chickasaw -----	1 007	1.4	15 765	9.7	916	1.2	246 207	1.1	880	1.3	216 787	1.1
Clarke -----	680	1.3	6 063	11.1	632	1.3	172 652	1.2	569	1.4	90 864	1.2
Clay -----	770	1.1	25 791	7.2	714	1.0	287 686	.9	696	1.0	261 925	.9
Clayton -----	1 616	.9	37 294	4.9	1 509	.8	335 605	.8	1 393	.9	264 033	.8
Clinton -----	1 362	1.1	20 514	8.4	1 243	1.1	329 733	1.0	1 174	1.2	284 080	1.1
Crawford -----	1 259	1.3	21 449	7.2	1 147	1.3	363 063	1.1	1 071	1.4	292 233	1.1
Dallas -----	942	1.0	25 439	4.3	875	.9	278 983	.9	835	1.0	249 068	.9
Davis -----	892	3.0	6 847	18.0	828	2.8	194 232	2.6	781	2.9	112 533	2.5
Decatur -----	649	1.3	7 057	10.1	599	1.2	173 115	1.2	521	1.3	84 629	1.2
Delaware -----	1 366	1.1	38 389	6.3	1 260	1.0	296 319	.9	1 213	1.1	259 480	.9
Des Moines -----	680	1.2	12 902	7.2	626	1.1	161 555	1.0	602	1.1	139 979	1.1
Dickinson -----	554	1.1	14 826	7.2	508	1.0	184 781	1.0	491	1.0	164 037	1.0
Dubuque -----	1 652	1.3	38 051	6.2	1 516	1.2	275 588	1.1	1 433	1.3	223 921	1.1
Emmet -----	557	1.1	13 832	9.1	517	.9	209 670	.9	497	1.0	188 176	1.0
Fayette -----	1 416	1.1	32 249	5.8	1 296	1.1	346 042	1.0	1 231	1.1	301 257	1.0
Floyd -----	882	1.1	19 550	7.2	811	1.1	262 555	1.0	777	1.1	235 754	1.1
Franklin -----	929	1.1	23 018	6.4	843	1.1	320 581	1.0	825	1.1	294 828	1.0
Fremont -----	597	1.1	24 929	8.2	555	1.0	270 200	.7	533	1.0	230 305	.8
Greene -----	851	.9	35 566	5.5	785	.9	336 979	.8	761	.9	306 071	.8
Grundy -----	854	.9	26 980	6.6	773	.9	298 279	.7	747	.9	280 902	.7
Guthrie -----	946	1.3	20 608	6.2	842	1.2	271 920	1.1	780	1.2	206 313	1.1
Hamilton -----	875	.9	34 684	4.8	810	.8	313 284	.8	784	.8	290 657	.8
Hancock -----	939	.9	23 846	8.7	870	.9	312 797	.9	850	.9	289 686	.9
Hardin -----	986	.9	27 713	5.6	894	.8	303 894	.7	858	.9	280 091	.7
Harrison -----	919	1.3	27 400	5.2	852	1.2	342 194	1.0	824	1.2	294 151	1.0
Henry -----	795	1.2	14 026	7.6	737	1.1	188 831	1.2	698	1.2	157 639	1.2
Howard -----	882	1.4	10 547	13.3	798	1.3	233 274	1.1	761	1.3	198 178	1.1
Humboldt -----	677	.9	27 612	5.9	627	.8	265 244	.8	618	.8	248 840	.8
Ida -----	728	1.7	18 980	6.3	662	1.4	248 095	1.1	635	1.4	213 378	1.1
Iowa -----	978	1.1	15 799	8.7	924	1.0	272 811	.9	857	1.1	207 091	.9
Jackson -----	1 326	1.4	8 006	18.9	1 180	1.4	240 340	1.4	1 089	1.4	169 830	1.4

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-23

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Net cash return from agricultural sales for the farm unit (see text) ¹				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Jasper -----	1 309	1.0	32 087	5.6	1 195	1.0	370 958	.9	1 143	1.0	306 533	.9
Jefferson -----	740	1.4	11 895	9.4	683	1.3	184 896	1.3	631	1.4	142 535	1.3
Johnson -----	1 241	1.1	14 559	9.2	1 153	1.1	248 641	1.0	1 085	1.1	202 620	1.0
Jones -----	1 112	1.1	18 078	8.8	983	1.1	270 433	1.0	931	1.1	223 868	1.0
Keokuk -----	952	1.2	16 504	7.4	868	1.2	267 668	1.1	810	1.2	195 808	1.1
Kossuth -----	1 592	1.0	42 111	4.9	1 502	1.0	580 414	.9	1 490	1.0	537 860	.9
Lee -----	873	1.2	14 499	6.8	818	1.1	206 408	1.1	780	1.1	165 453	1.1
Linn -----	1 529	1.0	18 036	8.0	1 412	.9	303 604	.9	1 338	.9	260 797	.9
Louisa -----	554	1.1	9 532	9.6	519	1.0	164 417	1.1	502	1.0	142 036	1.1
Lucas -----	629	2.4	1 310	48.4	576	2.4	156 312	2.4	523	2.5	76 475	2.4
Lyon -----	1 194	1.7	31 434	7.1	1 028	1.5	313 211	1.4	1 002	1.6	279 865	1.4
Madison -----	1 026	1.2	14 776	8.0	942	1.1	222 307	1.0	879	1.2	157 113	1.0
Mahaska -----	1 075	1.1	23 109	6.3	982	1.1	267 909	1.0	921	1.1	222 125	1.0
Marion -----	996	1.4	14 690	7.8	915	1.3	213 755	1.3	857	1.3	162 365	1.3
Marshall -----	949	.8	21 787	9.0	880	.8	282 571	.8	839	.8	244 553	.8
Mills -----	564	1.2	17 846	5.8	517	1.1	217 133	1.0	500	1.1	188 833	1.0
Mitchell -----	825	1.2	19 462	7.4	745	1.0	241 380	.9	724	1.0	218 886	.9
Monona -----	822	1.4	28 717	6.7	755	1.2	336 227	.9	717	1.3	286 468	.9
Monroe -----	683	1.4	6 089	18.6	624	1.4	145 059	1.4	575	1.4	74 121	1.5
Montgomery -----	616	1.2	15 785	7.7	575	1.2	207 995	1.1	546	1.2	167 462	1.2
Muscatine -----	803	1.0	12 359	8.1	726	1.0	189 685	1.1	691	1.1	164 397	1.1
O'Brien -----	1 146	1.3	33 468	5.7	1 019	1.1	332 435	1.0	1 010	1.2	309 290	1.0
Oscceola -----	737	1.4	25 142	6.9	671	1.4	245 245	1.3	655	1.4	222 804	1.3
Page -----	917	1.1	30 268	5.2	849	1.1	272 370	1.1	812	1.1	208 542	1.1
Palo Alto -----	840	1.1	31 988	5.8	793	1.0	318 023	.9	779	1.0	288 764	.9
Plymouth -----	1 615	1.3	42 740	4.0	1 448	1.3	461 805	1.0	1 360	1.3	400 880	1.1
Pocahontas -----	919	1.1	33 820	4.8	878	1.0	342 054	.9	871	1.0	320 421	.9
Polk -----	832	1.2	19 409	6.1	752	1.1	207 394	1.0	717	1.2	187 257	1.1
Pottawattamie -----	1 439	1.3	47 216	4.5	1 310	1.2	491 976	1.0	1 258	1.2	432 137	1.0
Poweshiek -----	933	1.2	19 524	7.2	861	1.3	300 074	1.1	812	1.3	231 967	1.2
Ringgold -----	675	1.4	7 656	14.8	634	1.3	233 914	1.1	573	1.4	118 635	1.2
Sac -----	968	1.2	31 266	7.5	874	1.1	327 634	.9	852	1.1	294 926	.9
Scott -----	916	1.2	14 775	9.3	842	1.1	212 360	1.0	801	1.2	191 452	1.0
Shelby -----	1 086	1.3	26 577	6.4	980	1.2	329 939	1.1	953	1.2	289 366	1.1
Sioux -----	1 998	1.2	81 511	3.2	1 646	1.2	452 658	1.0	1 597	1.2	416 245	1.0
Story -----	989	.9	28 996	4.4	913	.8	306 862	.8	892	.8	283 490	.8
Tama -----	1 293	1.1	16 160	12.0	1 179	1.1	356 110	.9	1 132	1.1	297 407	1.0
Taylor -----	742	1.4	7 298	14.3	690	1.4	219 727	1.2	635	1.4	140 091	1.2
Union -----	672	1.3	9 580	10.6	612	1.3	174 743	1.2	562	1.3	109 504	1.3
Van Buren -----	753	2.8	5 509	15.7	685	2.7	169 302	2.6	636	2.8	108 272	2.7
Wapello -----	758	1.4	7 626	10.5	714	1.3	150 251	1.5	659	1.4	112 143	1.5
Warren -----	1 216	1.1	13 056	11.1	1 109	1.1	233 679	1.1	1 033	1.1	166 704	1.2
Washington -----	1 078	1.1	27 112	6.2	956	1.1	267 495	1.0	916	1.1	223 302	1.0
Wayne -----	733	1.2	5 747	12.2	670	1.2	230 344	1.1	618	1.2	126 823	1.1
Webster -----	1 059	1.0	40 656	4.1	971	1.0	379 412	.8	949	1.0	357 814	.8
Winnebago -----	644	1.1	11 046	10.9	605	1.1	216 521	1.1	584	1.1	197 469	1.1
Winneshiek -----	1 495	1.7	25 768	7.6	1 364	1.5	284 228	1.4	1 273	1.5	221 182	1.4
Woodbury -----	1 255	1.2	23 626	8.4	1 123	1.2	386 499	1.0	1 032	1.2	310 103	1.0
Worth -----	643	1.0	9 589	9.0	589	.9	209 339	.8	562	.9	187 748	.8
Wright -----	811	.9	28 523	5.8	760	.7	333 393	.6	744	.7	312 831	.6
Irrigated land					Livestock and poultry							
Geographic area	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
					Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Iowa -----	1 063	1.2	115 724	.9	43 610	1.1	3 963 602	.8	29 987	1.2	1 065 744	1.1
Adair -----	2	14.8	(D)	(D)	581	1.4	56 938	1.3	523	1.4	24 237	1.5
Adams -----	-	-	-	-	436	1.6	39 983	1.5	408	1.6	17 897	1.7
Allamakee -----	5	13.2	37	13.2	766	1.4	80 171	1.4	457	1.6	18 891	1.7
Appanoose -----	5	17.5	81	28.2	583	2.9	43 828	3.2	541	3.0	23 722	3.4
Audubon -----	2	15.1	(D)	(D)	314	1.6	37 028	1.1	228	1.9	9 227	1.8
Benton -----	11	7.6	175	15.2	561	1.3	62 890	.8	406	1.5	11 654	1.6
Black Hawk -----	27	4.6	960	3.2	339	1.4	20 966	1.4	174	2.0	3 223	3.7
Boone -----	6	8.0	20	16.8	265	1.5	23 687	1.2	185	1.9	5 571	2.1
Bremer -----	6	10.7	280	12.9	521	1.5	33 683	1.5	186	2.3	4 043	3.4
Buchanan -----	12	6.4	387	4.4	537	1.4	28 925	1.3	226	1.9	5 420	2.3
Buena Vista -----	3	11.5	430	16.1	210	1.6	23 882	1.2	144	2.1	4 368	2.4
Butler -----	4	11.9	254	11.9	428	1.2	26 677	1.1	226	1.6	4 889	1.9
Calhoun -----	6	9.2	341	7.6	213	1.9	20 491	1.3	144	2.4	4 193	2.5
Carroll -----	5	9.8	635	4.2	449	1.3	72 902	.6	278	1.7	11 870	1.6
Cass -----	1	28.3	(D)	(D)	510	1.4	54 055	1.1	436	1.5	18 918	1.5
Cedar -----	7	9.3	16	5.4	440	1.4	32 448	1.2	329	1.6	10 185	1.7
Cerro Gordo -----	5	14.9	(D)	(D)	165	2.1	9 397	2.5	118	2.6	3 346	3.3
Cherokee -----	5	13.9	913	16.8	428	1.3	50 783	.9	283	1.7	11 519	1.6
Chickasaw -----	10	6.6	1 077	6.4	449	1.5	35 827	1.3	192	2.2	5 043	3.2

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Irrigated land				Livestock and poultry							
	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
					Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Clarke -----	4	17.1	73	22.8	471	1.4	38 628	1.3	431	1.5	20 117	1.3
Clay -----	10	5.8	758	1.8	218	1.7	22 729	1.2	157	2.1	5 358	2.3
Clayton -----	9	11.7	115	15.2	1 115	.9	100 245	.9	517	1.3	17 624	1.4
Clinton -----	14	8.4	103	5.7	591	1.4	59 168	1.0	340	1.8	10 612	1.9
Crawford -----	2	29.9	(D)	(D)	708	1.4	64 294	1.1	577	1.6	20 667	1.4
Dallas -----	13	8.0	238	5.2	303	1.6	20 857	2.0	237	1.9	7 309	2.3
Davis -----	7	12.9	54	2.6	618	3.1	43 295	2.7	493	3.3	19 722	2.9
Decatur -----	5	14.4	11	14.5	445	1.4	47 773	1.2	402	1.5	20 380	1.5
Delaware -----	10	10.1	661	6.8	833	1.2	76 197	1.0	249	1.8	7 210	1.9
Des Moines -----	16	6.7	814	.3	270	1.7	15 434	1.9	214	1.9	5 866	2.4
Dickinson -----	3	9.4	(D)	(D)	174	2.0	27 216	1.1	110	2.6	3 872	3.5
Dubuque -----	16	7.5	185	3.2	1 159	1.3	122 852	1.1	412	1.8	13 032	1.9
Emmet -----	2	17.6	(D)	(D)	157	2.0	16 608	1.4	113	2.5	(D)	(D)
Fayette -----	9	9.6	445	11.7	764	1.3	70 102	1.2	284	1.9	9 645	2.0
Floyd -----	7	7.3	920	7.2	299	1.7	16 681	1.8	183	2.2	3 951	2.5
Franklin -----	10	9.6	179	40.1	233	1.9	16 210	1.5	149	2.4	3 963	2.5
Fremont -----	13	4.4	2 076	2.5	259	1.6	22 096	1.1	228	1.7	(D)	(D)
Greene -----	6	11.2	(D)	(D)	274	1.6	23 666	1.8	232	1.7	(D)	(D)
Grundy -----	1	25.5	(D)	(D)	253	1.5	24 250	1.1	142	2.1	3 345	2.1
Guthrie -----	7	10.6	664	10.5	519	1.3	35 914	1.3	457	1.4	16 346	1.5
Hamilton -----	2	16.7	(D)	(D)	125	2.3	7 034	1.7	83	2.8	1 401	3.6
Hancock -----	8	7.0	775	4.9	209	1.7	16 073	1.8	123	2.2	2 902	2.1
Hardin -----	10	6.8	155	1.2	294	1.4	23 472	1.0	211	1.7	6 685	1.6
Harrison -----	75	3.1	17 450	2.2	417	1.6	37 441	1.2	333	1.8	12 613	1.6
Henry -----	4	13.4	9	10.4	319	1.7	16 166	2.0	256	1.9	6 682	2.1
Howard -----	5	10.3	172	10.4	398	1.6	34 047	1.4	180	2.2	6 397	2.3
Humboldt -----	3	15.9	(D)	(D)	123	2.1	13 666	1.5	64	3.0	2 066	4.3
Ida -----	1	—	(D)	(D)	332	1.6	36 936	1.0	233	1.9	8 255	1.7
Iowa -----	5	13.8	(D)	(D)	524	1.3	51 248	1.2	401	1.5	16 405	1.4
Jackson -----	14	8.4	284	6.3	974	1.5	102 856	1.3	700	1.6	27 476	1.7
Jasper -----	13	8.0	786	13.6	685	1.2	54 304	1.1	537	1.4	19 054	1.5
Jefferson -----	4	17.1	7	18.0	380	1.7	25 010	1.6	325	1.8	10 048	2.0
Johnson -----	13	8.6	305	6.0	606	1.3	38 931	1.4	428	1.6	12 853	1.6
Jones -----	7	13.5	(D)	(D)	607	1.2	64 373	1.0	395	1.5	15 263	1.6
Keokuk -----	2	23.9	(D)	(D)	476	1.5	30 966	1.4	404	1.5	13 997	1.6
Kossuth -----	6	12.0	587	14.6	361	1.6	33 741	1.2	175	2.2	5 657	2.3
Lee -----	14	7.1	1 688	5.9	444	1.4	30 136	1.4	343	1.7	10 252	2.1
Linn -----	37	4.9	581	18.0	702	1.1	43 250	1.2	502	1.3	12 075	1.4
Louisa -----	24	5.0	4 616	2.3	202	1.8	11 454	2.3	166	2.1	(D)	(D)
Lucas -----	—	—	—	—	441	2.6	37 644	2.6	411	2.7	19 583	2.6
Lyon -----	23	4.6	1 251	7.9	620	1.6	88 514	1.0	284	2.0	11 764	1.7
Madison -----	10	7.5	120	12.1	642	1.2	43 900	1.2	585	1.3	22 688	1.3
Mahaska -----	8	6.4	(D)	(D)	504	1.4	44 336	1.2	344	1.7	11 417	1.8
Marion -----	11	8.3	280	24.6	498	1.5	32 098	1.7	413	1.7	13 220	1.8
Marshall -----	10	9.0	38	20.0	387	1.2	28 373	1.3	298	1.4	8 658	1.6
Mills -----	4	10.9	664	13.9	221	1.9	17 990	1.3	178	2.1	5 832	2.1
Mitchell -----	3	10.6	3	10.6	289	1.5	36 900	1.0	107	2.6	3 033	2.7
Monona -----	108	2.2	37 781	1.5	314	1.8	39 705	1.2	232	2.1	9 938	1.9
Monroe -----	3	17.9	3	17.9	471	1.5	40 630	1.4	422	1.6	19 376	1.5
Montgomery -----	4	15.6	32	16.9	326	1.5	29 723	1.3	263	1.7	10 286	1.7
Muscatine -----	43	4.2	4 415	4.1	333	1.5	21 273	1.7	262	1.8	7 493	2.0
O'Brien -----	5	11.5	(D)	(D)	338	1.6	33 481	1.0	156	2.2	4 805	2.3
Osceola -----	6	11.8	604	14.8	239	2.0	26 898	1.2	83	3.2	2 082	2.9
Page -----	9	8.2	1 400	3.5	521	1.3	38 759	1.3	434	1.5	15 073	1.6
Palo Alto -----	26	5.0	3 962	2.9	225	1.7	21 187	1.3	127	2.3	4 177	2.1
Plymouth -----	12	8.0	1 930	10.5	715	1.3	92 041	.8	477	1.6	18 506	1.5
Pocahontas -----	6	10.2	(D)	(D)	181	2.0	15 639	1.4	87	3.0	1 882	4.2
Polk -----	21	7.2	417	9.2	242	2.0	13 162	1.9	193	2.3	4 721	2.4
Pottawattamie -----	28	4.9	3 067	4.0	682	1.4	74 955	.9	535	1.5	18 886	1.5
Poweshiek -----	1	—	(D)	(D)	530	1.4	43 718	1.3	443	1.5	17 404	1.6
Ringgold -----	—	—	—	—	482	1.4	49 136	1.3	453	1.5	26 840	1.3
Sac -----	7	7.9	739	6.0	299	1.6	46 962	.7	213	2.0	7 437	1.9
Scott -----	26	5.7	988	2.9	343	1.6	24 337	1.6	230	2.0	5 477	3.2
Shelby -----	3	13.8	168	14.7	510	1.4	43 037	1.2	394	1.6	12 117	1.7
Sioux -----	41	3.7	5 514	3.0	845	1.2	186 379	.5	233	2.1	10 127	1.8
Story -----	14	7.9	125	17.7	222	1.7	17 454	1.1	151	2.1	3 896	2.1
Tama -----	10	8.9	375	18.2	596	1.3	41 636	1.3	454	1.4	15 157	1.4
Taylor -----	1	37.3	(D)	(D)	454	1.5	39 735	1.5	408	1.6	17 054	1.7
Union -----	2	21.4	(D)	(D)	464	1.5	41 025	1.4	428	1.5	19 823	1.5
Van Buren -----	10	11.0	59	14.1	451	3.0	29 600	2.8	400	3.1	14 465	3.0
Wapello -----	3	14.7	3	14.7	398	1.7	24 322	1.6	343	1.8	12 320	1.6
Warren -----	7	12.6	53	16.4	706	1.3	43 380	1.4	632	1.3	19 273	1.5
Washington -----	5	14.5	(D)	(D)	421	1.6	29 911	1.5	304	1.8	10 301	2.0
Wayne -----	5	13.7	46	17.0	472	1.4	37 277	1.5	441	1.4	19 236	1.6
Webster -----	6	7.7	64	8.3	208	1.9	10 824	1.9	156	2.2	3 483	2.2
Winnebago -----	2	14.4	(D)	(D)	125	2.5	5 041	3.2	63	3.5	1 233	4.6
Winneshiek -----	6	12.2	62	21.2	1 010	1.5	96 613	1.4	458	1.8	16 005	1.9
Woodbury -----	32	4.1	6 352	1.4	508	1.5	66 198	.9	393	1.7	15 349	1.9
Worth -----	8	11.4	482	12.0	210	1.7	11 468	1.4	153	2.0	3 034	2.4
Wright -----	1	20.8	(D)	(D)	131	2.0	8 461	2.0	76	2.8	1 663	3.2

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-25

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry —Con.											
	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Iowa -----	5 878	1.3	258 925	1.0	31 790	1.0	14 153 158	.6	6 760	1.1	405 354	1.0
Adair -----	24	5.2	867	4.8	293	1.7	84 469	1.7	87	3.2	3 460	5.4
Adams -----	13	9.0	175	9.0	162	2.3	48 908	2.5	28	5.9	1 200	11.0
Allamakee -----	319	1.9	17 165	1.7	329	1.8	124 684	1.3	52	4.3	1 497	4.6
Appanoose -----	24	8.0	382	10.6	93	4.6	12 861	4.6	51	6.0	2 044	7.5
Audubon -----	10	9.5	194	12.2	293	1.6	139 909	1.1	44	4.6	2 371	5.6
Benton -----	47	3.9	2 319	3.8	459	1.3	163 836	1.1	115	2.6	4 438	4.8
Black Hawk -----	50	3.4	1 976	3.1	341	1.3	166 179	.9	62	3.2	3 311	6.9
Boone -----	14	8.2	236	17.3	212	1.6	98 653	1.1	88	3.0	2 877	5.4
Bremer -----	194	2.1	8 119	1.9	323	1.7	101 182	1.5	71	3.5	2 390	6.5
Buchanan -----	204	2.1	4 649	2.2	474	1.4	193 272	1.0	71	3.3	2 234	5.3
Buena Vista -----	12	7.0	471	2.2	382	1.2	214 021	.8	62	3.5	3 547	4.3
Butler -----	76	2.9	3 160	2.1	443	1.2	219 845	.9	111	2.6	3 771	3.6
Calhoun -----	8	9.5	130	15.5	257	1.6	139 325	1.1	77	3.4	5 188	6.1
Carroll -----	14	8.9	341	9.3	584	1.2	330 310	.8	45	4.1	1 568	4.6
Cass -----	16	7.7	390	9.0	291	1.7	94 483	1.3	82	3.4	4 275	6.3
Cedar -----	31	5.0	900	5.3	428	1.3	223 719	.9	127	2.4	4 993	3.8
Cerro Gordo -----	12	6.8	403	7.4	251	1.6	115 499	1.3	48	3.9	1 270	4.8
Cherokee -----	38	4.4	1 551	4.6	393	1.4	198 080	1.0	49	3.9	4 516	3.4
Chickasaw -----	146	2.4	5 882	2.3	344	1.6	138 910	1.1	51	4.2	2 986	8.4
Clarke -----	19	6.3	467	5.3	157	2.1	31 552	2.4	65	3.6	2 113	4.2
Clay -----	4	13.5	119	16.5	237	1.6	115 653	1.1	64	3.3	6 022	4.2
Clayton -----	545	1.2	26 611	1.2	644	1.1	288 229	.8	75	3.4	2 768	4.6
Clinton -----	60	3.5	3 054	3.4	526	1.4	168 278	1.2	88	3.3	3 855	5.5
Crawford -----	33	4.6	1 031	4.3	471	1.6	181 594	1.2	74	3.6	4 767	3.5
Dallas -----	10	9.1	250	10.6	164	2.1	58 480	1.7	52	4.1	2 114	6.9
Davis -----	106	4.8	1 738	5.7	225	3.6	56 187	3.3	144	3.8	16 670	4.1
Decatur -----	23	7.0	371	9.8	123	2.7	42 376	2.2	39	5.4	2 183	8.7
Delaware -----	414	1.6	22 570	1.4	815	1.1	489 966	.7	71	3.4	1 726	5.7
Des Moines -----	14	7.8	812	5.7	126	2.3	53 151	1.4	57	3.9	2 777	3.6
Dickinson -----	12	8.1	625	4.7	140	2.2	57 822	1.7	43	4.4	7 468	3.2
Dubuque -----	550	1.5	33 515	1.3	765	1.4	371 003	1.0	44	4.4	1 783	7.3
Emmet -----	5	11.6	(D)	(D)	151	1.9	57 110	1.7	29	5.6	1 263	8.3
Fayette -----	321	1.8	15 461	1.6	521	1.4	237 566	.9	83	3.4	3 752	8.4
Floyd -----	23	6.1	604	7.4	306	1.6	128 219	1.2	44	4.7	1 908	6.1
Franklin -----	27	5.6	961	4.1	309	1.5	168 832	1.0	69	3.7	4 429	3.4
Fremont -----	3	16.5	(D)	(D)	115	2.4	41 602	1.4	14	5.6	782	4.8
Greene -----	2	18.3	(D)	(D)	181	1.8	75 794	1.3	52	4.1	2 645	3.5
Grundy -----	21	5.7	819	6.4	305	1.4	145 054	1.0	68	3.0	5 596	2.1
Guthrie -----	21	5.2	424	6.9	258	1.7	96 817	1.3	65	3.4	2 241	7.5
Hamilton -----	7	8.0	413	1.7	235	1.4	207 043	.6	51	3.8	1 370	4.3
Hancock -----	16	7.5	504	9.6	349	1.3	166 642	.9	56	3.4	3 282	2.9
Hardin -----	7	9.5	161	10.6	337	1.2	204 098	.7	66	3.2	2 317	5.6
Harrison -----	8	12.1	123	16.2	191	2.2	62 520	1.5	20	7.2	847	6.5
Henry -----	13	7.0	364	6.8	196	2.0	91 562	1.4	81	3.5	3 554	5.2
Howard -----	125	2.8	5 148	2.6	340	1.7	103 793	1.7	37	5.0	1 744	7.6
Humboldt -----	12	7.7	459	7.3	186	1.6	99 198	1.0	51	3.7	1 863	5.4
Ida -----	15	6.1	503	5.2	295	1.6	120 240	1.1	50	4.0	2 635	5.4
Iowa -----	39	4.5	1 078	5.1	372	1.5	144 730	1.3	78	3.5	4 167	5.6
Jackson -----	165	2.5	8 010	2.3	512	1.7	162 940	1.5	71	3.9	3 028	5.4
Jasper -----	35	4.2	1 633	3.2	445	1.3	233 254	.8	126	2.6	4 622	3.2
Jefferson -----	14	7.7	621	4.9	199	2.1	83 196	1.4	75	3.7	6 885	2.3
Johnson -----	113	2.8	3 071	2.8	496	1.4	206 249	1.1	153	2.4	7 745	4.9
Jones -----	100	2.7	4 133	2.7	482	1.3	257 102	.8	67	3.5	1 773	4.5
Keokuk -----	18	7.5	232	9.3	385	1.5	210 698	1.0	88	3.1	7 125	3.2
Kossuth -----	45	4.1	1 742	3.6	488	1.3	231 962	.9	96	3.0	4 766	3.7
Lee -----	35	4.6	1 600	4.0	251	1.8	131 176	1.0	72	3.7	3 746	5.4
Linn -----	75	3.2	2 339	3.3	396	1.4	128 574	1.2	125	2.3	4 715	2.9
Louisa -----	6	14.7	(D)	(D)	159	2.1	59 935	1.9	32	5.5	1 088	7.5
Lucas -----	10	11.4	445	8.0	96	4.2	28 400	4.0	57	4.8	4 318	5.5
Lyon -----	86	3.2	3 884	2.8	514	1.6	232 607	1.1	75	3.6	7 911	5.8
Madison -----	11	8.7	156	16.3	216	1.7	61 197	1.4	88	3.0	3 326	4.6
Mahaska -----	36	4.6	1 578	5.0	436	1.3	242 573	.9	93	3.1	4 643	4.9
Marion -----	30	5.0	1 267	5.4	285	1.8	118 376	1.3	78	3.5	5 715	3.5
Marshall -----	18	5.9	892	3.9	232	1.6	126 867	1.0	94	2.8	4 455	3.7
Mills -----	3	17.7	92	17.9	128	2.5	40 049	1.6	21	6.6	1 218	7.8
Mitchell -----	89	2.8	3 161	2.8	372	1.4	179 330	1.1	60	3.7	2 406	5.5
Monona -----	13	7.8	216	12.9	235	2.1	72 564	1.7	40	4.8	1 700	5.4
Monroe -----	25	5.3	947	3.9	122	2.6	34 691	2.3	51	4.5	3 022	6.7
Montgomery -----	9	8.7	256	8.1	180	2.0	59 401	1.9	32	5.0	3 077	3.5
Muscatine -----	27	5.3	1 486	4.4	246	1.7	91 615	1.5	84	3.0	3 052	4.8
O'Brien -----	31	4.9	1 008	5.1	493	1.3	266 685	.8	88	3.1	4 725	4.4
Oscceola -----	45	4.7	1 807	4.9	237	2.0	134 341	1.2	64	3.8	6 026	3.6
Page -----	9	8.0	261	5.6	277	1.7	85 280	1.5	47	4.1	1 976	6.1
Palo Alto -----	16	7.8	383	10.5	308	1.5	141 233	1.1	43	4.3	4 037	4.1
Plymouth -----	48	4.3	2 140	3.7	780	1.3	403 064	.9	123	2.9	8 615	2.2
Pocahontas -----	12	8.0	362	5.4	260	1.6	116 921	1.2	40	4.9	2 356	6.3
Polk -----	12	7.5	464	4.6	120	2.6	41 581	2.0	57	4.4	2 353	6.3
Pottawattamie -----	15	8.1	521	11.2	405	1.6	143 893	1.2	69	4.0	3 126	7.4
Poweshiek -----	23	5.8	867	4.3	310	1.8	127 039	1.4	82	3.4	3 748	4.7

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry —Con.											
	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Relative standard error of estimate (percent)	
Ringgold -----	9	9.1	149	10.1	191	2.1	49 114	1.9	43	4.5	2 841	12.7
Sac -----	16	5.5	826	4.3	403	1.4	228 016	.8	83	3.0	9 410	1.7
Scott -----	35	4.4	2 264	2.7	284	1.6	139 039	1.1	80	3.6	2 431	5.0
Shelby -----	18	6.1	401	7.8	484	1.4	194 906	1.2	50	3.9	5 050	2.8
Sioux -----	155	2.3	10 100	1.6	972	1.2	601 488	.7	116	2.8	27 585	1.1
Story -----	13	7.7	951	4.7	237	1.5	112 381	1.1	93	2.8	4 793	3.0
Tama -----	39	3.8	1 305	4.2	411	1.5	132 216	1.3	113	2.9	6 994	4.7
Taylor -----	14	6.1	445	3.2	191	2.0	65 152	1.3	44	3.7	2 233	5.9
Union -----	9	10.1	235	12.9	145	2.4	43 233	2.3	51	4.3	22 893	.5
Van Buren -----	42	6.4	737	7.2	158	3.8	70 950	2.0	98	4.5	4 851	6.9
Wapello -----	17	6.9	408	4.4	142	2.4	54 724	2.1	42	4.6	3 599	2.5
Warren -----	32	4.5	1 286	3.9	226	2.0	72 833	1.4	77	3.8	3 011	5.9
Washington -----	53	4.5	1 153	5.5	561	1.3	344 170	.8	109	3.0	8 042	4.7
Wayne -----	14	7.5	383	7.2	149	2.1	39 010	1.7	45	4.1	2 747	3.2
Webster -----	11	8.6	413	12.4	234	1.7	116 958	1.1	49	3.6	1 741	5.7
Winnebago -----	29	5.3	867	5.0	193	1.9	79 519	1.8	55	3.8	1 876	5.0
Winneshiek -----	461	1.8	22 796	1.6	591	1.6	182 524	1.3	72	3.9	3 824	3.7
Woodbury -----	13	8.9	254	11.1	374	1.6	146 568	1.2	93	3.4	4 180	4.4
Worth -----	12	9.1	371	7.6	206	1.7	72 076	1.5	46	4.1	1 548	4.8
Wright -----	5	15.2	116	19.3	181	1.6	82 232	1.1	59	3.2	1 830	4.7
Livestock and poultry —Con.												
Geographic area	Hens and pullets of laying age inventory					Broilers and other meat-type chickens sold						
	Farms		Total		Farms		Total					
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Relative standard error of estimate (percent)	
	2 590	1.2	11 162 662	.2	652	1.5	9 199 943	.3				
Adair -----	30	5.8	958	10.9	6	11.8	2 120				17.7	
Adams -----	23	6.9	1 420	14.0	3	—	1 107 000				(D)	
Allamakee -----	21	7.3	2 752	8.9	5	11.1					(D)	
Apanoone -----	21	8.6	443	12.5	—	—						
Audubon -----	12	7.5	(D)	(D)	4	12.4	(D)	(D)				
Benton -----	33	5.1	383 884	.1	10	11.0	5 318				10.8	
Black Hawk -----	32	4.8	10 847	2.0	19	5.7	12 180				10.2	
Boone -----	32	4.7	217 087	.6	5	16.2	750				21.1	
Bremer -----	28	5.6	(D)	(D)	7	10.7	1 985				6.3	
Buchanan -----	54	4.1	99 883	4.8	14	7.0	9 108				23.4	
Buena Vista -----	14	7.7	(D)	(D)	5	13.1	1 457				7.0	
Butler -----	36	4.2	(D)	(D)	12	6.1	2 752				7.4	
Calhoun -----	14	7.1	(D)	(D)	3	18.0	1 394				19.8	
Carroll -----	26	6.3	2 550	8.6	7	11.7	1 265				17.3	
Cass -----	17	6.5	(D)	(D)	5	9.8	(D)	(D)				
Cedar -----	35	5.3	1 624	8.1	7	13.0	3 042				16.8	
Cerro Gordo -----	19	6.6	60 573	12.7	4	11.5	550				13.0	
Cherokee -----	19	7.4	1 462	9.2	4	13.8	(D)	(D)				
Chickasaw -----	27	5.7	44 389	5.7	8	10.7	1 473				14.9	
Clarke -----	36	4.7	1 681	7.8	—	—	—	—				
Clay -----	12	8.0	159 285	4.1	14	6.5	(D)	(D)				
Clayton -----	33	5.1	(D)	(D)	5	10.7	3 205				10.3	
Clinton -----	41	4.7	2 299	9.4	15	8.4	1 707				11.9	
Crawford -----	41	5.3	19 399	27.8	6	13.6	352				19.3	
Dallas -----	20	6.8	138 161	2.6	14	8.7	(D)	(D)				
Davis -----	54	6.1	54 193	11.9	4	15.0	204				19.2	
Decatur -----	30	5.9	662	8.6	3	14.2	740				24.6	
Delaware -----	34	5.0	5 027	2.0	7	10.0	2 140				14.2	
Des Moines -----	13	9.1	322	11.0	—	—	—	—				
Dickinson -----	10	8.5	(D)	(D)	2	14.2	(D)	(D)				
Dubuque -----	30	5.6	3 629	13.9	8	11.5	605				13.7	
Emmet -----	15	7.4	(D)	(D)	7	11.4	2 155				10.7	
Fayette -----	37	4.8	(D)	(D)	9	10.4	2 255				19.7	
Floyd -----	21	6.9	877	11.1	7	12.7	(D)	(D)				
Franklin -----	18	7.1	389 596	2.5	6	12.1	580				16.7	
Fremont -----	11	9.4	368	10.4	2	13.9	(D)	(D)				
Greene -----	13	8.7	1 252	20.8	4	15.8	(D)	(D)				
Grundy -----	23	5.3	28 285	.6	8	10.2	2 955				15.5	
Guthrie -----	22	6.3	(D)	(D)	7	9.9	2 499				14.1	
Hamilton -----	17	7.2	8 875	13.9	7	10.0	1 398				16.6	
Hancock -----	18	7.8	(D)	(D)	9	10.9	920				12.9	
Hardin -----	23	6.0	1 241 915	(L)	7	11.9	6 185				20.2	
Harrison -----	24	7.0	1 066	10.8	7	13.2	1 272				26.2	
Henry -----	20	6.9	(D)	(D)	6	13.7	388				18.6	
Howard -----	24	6.2	4 117	21.8	5	12.1	900				11.8	
Humboldt -----	17	6.5	71 651	2.5	9	7.6	8 684				3.8	
Ida -----	19	6.2	829	13.1	8	8.9	769				4.9	
Iowa -----	17	7.3	900	7.8	6	9.4	3 659				12.8	
Jackson -----	43	4.8	7 470	23.0	10	10.2	7 218				6.3	

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

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Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry —Con.											
	Hens and pullets of laying age inventory					Broilers and other meat-type chickens sold						
	Farms		Total			Farms		Total				
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number		
Jasper -----	40	4.4	15 235	3.5	13	8.6	3 738	12.6				
Jefferson -----	22	6.7	2 261	15.9	1	41.7	(D)					
Johnson -----	101	2.9	464 316	.1	16	7.4	18 618	21.1				
Jones -----	30	5.4	1 500	7.2	1	35.7	(D)					
Keokuk -----	25	5.8	(D)	(D)	5	12.1	800	22.7				
Kossuth -----	27	6.1	78 019	2.2	15	6.9	2 491	8.3				
Lee -----	26	6.6	1 376	22.2	2	21.8	(D)					
Linn -----	44	4.3	2 891	8.6	14	8.0	3 391	17.8				
Louisa -----	8	10.8	343	19.0	—	—	—	—				
Lucas -----	13	9.4	(D)	(D)	2	28.2	(D)	(D)				
Lyon -----	21	6.6	12 889	2.0	12	8.3	(D)	(D)				
Madison -----	27	5.9	(D)	(D)	5	16.2	(D)	(D)				
Mahaska -----	40	4.6	94 848	5.3	6	13.0	1 197	17.0				
Marion -----	35	5.0	44 542	.4	6	13.9	794	14.6				
Marshall -----	19	6.2	(D)	(D)	6	12.4	840	10.4				
Mills -----	11	9.6	224	10.7	—	—	—	—				
Mitchell -----	33	4.9	293 652	.5	8	9.7	(D)	(D)				
Monona -----	14	9.3	521	12.1	1	35.7	(D)	(D)				
Monroe -----	26	6.5	813	9.9	—	—	—	—				
Montgomery -----	10	9.2	483	12.4	1	—	(D)	(D)				
Muscatine -----	30	5.6	1 861	9.5	5	11.9	892	18.1				
O'Brien -----	17	6.6	(D)	(D)	6	9.3	(D)	(D)				
Oscceola -----	11	9.0	(D)	(D)	5	13.3	1 300	20.5				
Page -----	26	5.9	2 000	14.0	4	18.2	(D)	(D)				
Palo Alto -----	9	9.9	566	15.8	5	12.4	(D)	(D)				
Plymouth -----	46	4.7	3 658	6.9	9	10.6	2 450	14.0				
Pocahontas -----	17	7.3	(D)	(D)	8	9.8	(D)	(D)				
Polk -----	21	7.2	854	10.0	6	17.2	4 951	41.4				
Pottawattamie -----	38	5.5	1 867	6.9	3	19.4	685	16.5				
Poweshiek -----	17	7.8	(D)	(D)	4	16.9	1 000	16.9				
Ringgold -----	14	8.9	286	10.4	6	11.1	(D)	(D)				
Sac -----	29	4.8	111 400	.2	4	11.5	355	4.5				
Scott -----	28	6.0	2 545	9.9	7	10.8	1 835	19.1				
Shelby -----	27	5.5	1 407	5.2	7	10.4	(D)	(D)				
Sioux -----	38	4.7	530 976	1.7	20	6.2	2 245 745	.1				
Story -----	29	4.2	43 795	2.3	9	11.5	2 455	10.2				
Tama -----	58	4.1	47 107	15.9	17	7.9	7 566	16.9				
Taylor -----	25	5.8	853	8.8	7	8.8	(D)	(D)				
Union -----	12	10.0	684	15.7	5	8.6	1 054 320	(L)				
Van Buren -----	34	6.9	5 201	35.4	1	43.6	(D)	(D)				
Wapello -----	18	6.5	(D)	(D)	6	11.6	617	14.2				
Warren -----	33	5.5	7 479	2.2	5	14.8	929	21.5				
Washington -----	52	4.3	201 966	1.9	17	8.1	7 086	13.6				
Wayne -----	15	7.9	256	10.5	—	—	—	—				
Webster -----	18	6.2	(D)	(D)	6	10.7	2 423	21.7				
Winnebago -----	14	7.3	1 223	19.5	12	8.6	3 657	19.9				
Winneshiek -----	57	3.8	255 098	.1	5	13.0	(D)	(D)				
Woodbury -----	31	6.3	1 165	8.8	4	16.1	3 690	19.7				
Worth -----	12	9.1	11 360	16.9	6	16.3	2 835	21.0				
Wright -----	13	9.0	(D)	(D)	9	10.6	2 880	13.3				
Geographic area	Selected crops harvested											
	Corn for grain or seed					Corn for silage or green chop						
	Farms		Acres		Quantity		Farms		Acres			
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)		
Iowa -----	72 756	1.1	12 512 815	.8	1 754 149 889	.8	9 575	1.0	260 770	.8	4 096 921	.7
Adair -----	677	1.3	102 811	1.1	13 502 866	1.1	63	3.1	1 577	2.3	22 203	2.3
Adams -----	451	1.5	60 843	1.4	7 769 782	1.4	44	3.8	1 174	2.4	16 845	2.5
Allamakee -----	689	1.5	70 111	1.3	8 601 752	1.3	324	1.9	7 290	2.0	113 011	2.1
Appanoose -----	396	3.3	30 657	3.1	3 441 291	3.1	42	5.7	865	4.7	9 730	5.1
Audubon -----	1 575	1.2	110 355	1.0	15 543 035	.9	39	3.4	948	2.9	13 304	2.3
Benton -----	1 036	1.1	178 600	.9	24 399 018	.9	110	2.3	3 016	1.6	49 036	1.6
Black Hawk -----	849	.8	151 856	.7	22 483 724	.7	84	2.5	1 626	2.3	29 586	2.0
Boone -----	724	.9	144 447	.8	22 148 282	.8	35	3.1	908	2.8	13 511	2.3
Bremer -----	835	1.2	117 562	1.1	17 369 527	1.1	173	2.1	3 533	2.4	59 851	2.6
Buchanan -----	975	1.1	176 119	.9	25 272 487	.9	152	2.2	2 810	2.6	44 910	2.9
Buena Vista -----	818	.9	154 306	.8	22 561 472	.8	64	2.5	2 865	2.2	54 321	2.0
Butler -----	889	.8	150 633	.8	21 966 616	.8	102	2.2	2 042	1.9	35 879	1.8
Calhoun -----	767	1.1	153 415	1.0	24 359 259	.9	48	3.4	2 071	2.0	33 107	2.6
Carroll -----	986	1.1	160 115	.9	23 451 686	.9	98	2.2	4 280	1.6	70 737	1.7
Cass -----	721	1.2	132 785	1.0	18 520 747	1.0	74	2.8	1 765	3.1	26 747	3.8
Cedar -----	849	1.1	169 694	1.0	24 009 947	1.0	91	2.5	1 879	2.3	28 555	2.2
Cerro Gordo -----	681	1.0	161 220	.9	22 088 779	.9	42	4.0	888	4.1	12 597	4.5
Cherokee -----	820	1.1	140 647	.9	20 294 392	.9	155	1.8	4 797	2.0	79 866	2.2
Chickasaw -----	781	1.3	128 632	1.1	17 237 293	1.0	189	2.1	4 661	1.7	77 318	1.8

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested											
	Corn for grain or seed						Corn for silage or green chop					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, green	Relative standard error of estimate (percent)
Clarke -----	382	1.5	35 482	1.2	4 017 143	1.2	42	3.5	1 314	3.4	18 110	3.9
Clay -----	652	1.0	134 837	.9	18 952 200	.9	55	2.9	2 463	3.9	48 858	3.7
Clayton -----	1 211	.9	162 965	.8	20 954 330	.8	400	1.3	8 835	1.4	120 117	1.4
Clinton -----	1 073	1.2	182 501	1.0	24 468 631	1.0	169	1.9	5 349	1.7	92 037	1.5
Crawford -----	944	1.4	163 348	1.1	22 533 198	1.1	73	2.4	2 308	3.8	27 371	1.8
Dallas -----	661	1.1	133 558	.9	19 348 871	.9	34	3.8	1 177	5.9	15 216	4.8
Davis -----	478	3.3	43 091	2.4	5 304 929	2.4	67	4.7	1 551	3.9	22 403	3.8
Decatur -----	293	1.7	27 998	1.6	3 382 919	1.6	44	3.5	1 571	2.2	23 692	1.8
Delaware -----	1 134	1.1	176 359	.9	23 820 937	.9	405	1.5	9 286	1.5	138 816	1.5
Des Moines -----	491	1.2	72 638	1.1	10 239 175	1.2	51	2.9	1 223	2.9	20 250	2.8
Dickinson -----	425	1.2	82 755	1.1	10 687 952	1.1	59	2.7	2 575	1.7	40 950	1.4
Dubuque -----	1 257	1.3	124 324	1.1	15 917 137	1.1	463	1.5	11 264	1.3	167 410	1.3
Emmet -----	467	1.0	99 213	.9	13 959 038	.9	36	3.7	881	2.9	15 014	3.1
Fayette -----	1 140	1.1	181 493	1.0	24 968 718	1.0	326	1.7	8 093	1.4	134 984	1.6
Floyd -----	697	1.2	134 445	1.1	18 442 786	1.1	81	2.9	2 056	2.6	32 160	2.2
Franklin -----	785	1.2	172 740	1.0	26 089 978	1.0	59	3.1	1 578	1.8	32 248	1.7
Fremont -----	474	1.1	116 365	.8	17 164 082	.8	13	4.9	274	3.3	5 185	3.1
Greene -----	710	1.0	155 469	.8	25 097 189	.8	27	3.3	1 052	1.2	20 698	1.5
Grundy -----	700	.9	157 377	.7	24 257 243	.7	37	3.2	1 065	3.5	19 193	3.4
Guthrie -----	658	1.3	108 494	1.1	15 136 795	1.1	43	3.1	954	3.1	12 529	3.6
Hamilton -----	729	.8	157 833	.8	24 820 722	.7	12	6.0	526	5.7	9 770	4.2
Hancock -----	812	.9	170 059	.9	24 434 863	.9	58	3.0	1 209	2.8	21 879	2.9
Hardin -----	792	.9	165 980	.8	26 165 456	.8	62	2.5	1 266	2.4	25 169	4.2
Harrison -----	714	1.3	160 373	1.1	23 697 759	1.0	53	3.4	1 614	1.8	26 501	1.6
Henry -----	556	1.3	88 721	1.3	12 409 536	1.3	45	3.8	1 179	3.8	22 158	2.8
Howard -----	676	1.4	110 243	1.2	12 841 876	1.2	162	2.2	4 153	2.1	57 293	2.0
Humboldt -----	588	.8	132 946	.8	21 056 659	.8	36	3.3	1 202	2.2	23 068	2.4
Ida -----	591	1.4	119 617	1.1	17 025 671	1.1	56	2.8	2 228	2.9	29 356	3.4
Iowa -----	735	1.1	126 689	.9	15 437 381	1.0	111	2.1	3 357	2.4	43 433	2.5
Jackson -----	902	1.5	98 101	1.4	11 095 970	1.4	240	2.1	5 752	2.3	75 012	2.2
Jasper -----	981	1.1	172 180	.9	24 563 637	.9	77	2.6	2 344	3.4	40 860	4.3
Jefferson -----	485	1.5	69 702	1.3	9 295 383	1.3	50	3.5	1 811	6.1	24 434	7.0
Johnson -----	880	1.2	113 861	1.1	14 789 964	1.1	154	2.2	2 614	2.1	40 762	2.2
Jones -----	830	1.1	144 168	1.1	18 741 223	1.1	183	1.9	5 661	1.6	83 447	1.6
Keokuk -----	695	1.3	114 181	1.1	14 649 702	1.1	57	3.1	1 488	2.3	20 840	2.8
Kossuth -----	1 435	1.0	302 923	.9	45 409 171	.9	96	2.5	2 813	1.7	57 024	1.8
Lee -----	593	1.3	83 928	1.2	11 753 910	1.1	96	2.5	2 423	3.0	46 179	5.0
Linn -----	1 038	1.0	142 449	.9	19 338 493	.9	164	2.0	3 783	1.8	58 763	1.7
Louisa -----	434	1.2	80 765	1.1	10 802 648	1.1	32	4.7	500	4.8	6 731	4.6
Lucas -----	298	2.9	27 861	2.6	3 335 836	2.7	43	5.0	1 317	4.6	15 914	3.8
Lyon -----	923	1.6	144 479	1.3	18 493 448	1.3	251	2.0	7 815	2.0	129 333	3.6
Madison -----	660	1.3	74 784	1.1	10 045 059	1.1	55	3.0	1 795	2.9	26 039	3.7
Mahaska -----	800	1.1	123 143	1.0	17 119 766	.9	127	2.2	2 970	2.3	45 842	2.0
Marion -----	667	1.4	79 467	1.3	10 441 414	1.4	56	3.5	1 276	4.0	18 194	3.7
Marshall -----	745	.9	149 890	.8	22 158 940	.8	56	2.6	1 788	2.1	29 483	2.3
Mills -----	424	1.2	99 293	1.0	14 904 460	1.0	9	6.8	418	2.1	8 145	2.1
Mitchell -----	667	1.1	126 071	.9	16 498 024	.9	181	1.9	6 873	1.8	110 093	1.7
Monona -----	647	1.3	161 113	.9	22 148 419	.9	74	3.1	2 683	3.7	44 346	4.3
Monroe -----	335	1.8	27 399	1.7	3 038 084	1.8	64	3.0	2 321	1.8	31 783	1.6
Montgomery -----	494	1.3	84 282	1.2	12 176 184	1.2	22	4.1	760	1.7	13 334	2.0
Muscatine -----	589	1.2	92 569	1.1	12 401 552	1.1	60	3.3	1 738	2.3	29 186	2.2
O'Brien -----	948	1.2	156 380	1.0	21 602 540	1.0	97	2.4	2 729	2.1	47 676	2.1
Osceola -----	619	1.5	110 386	1.3	14 268 380	1.3	71	3.1	2 167	2.1	34 279	2.2
Page -----	699	1.2	100 327	1.1	14 180 949	1.1	42	3.6	1 065	5.4	16 915	6.6
Palo Alto -----	725	1.0	154 748	.9	22 770 028	.9	49	3.5	1 132	3.7	22 798	6.5
Plymouth -----	1 232	1.3	223 661	1.0	30 908 110	1.0	140	2.0	5 054	1.6	73 268	1.4
Pocahontas -----	829	1.0	165 258	.9	25 063 386	.9	44	3.4	1 366	2.5	24 019	1.8
Polk -----	534	1.3	97 081	1.1	14 878 392	1.1	22	5.0	551	4.2	9 500	5.1
Pottawattamie -----	1 128	1.3	242 311	1.0	36 053 220	1.0	124	2.1	3 052	1.9	56 378	2.4
Poweshiek -----	712	1.3	122 666	1.2	15 842 341	1.2	74	2.8	1 976	2.0	33 983	2.3
Ringgold -----	419	1.5	47 187	1.3	5 502 285	1.2	33	4.4	1 056	3.6	12 673	4.6
Sac -----	800	1.2	154 463	.9	22 931 866	.9	63	2.8	2 166	2.8	38 459	2.8
Scott -----	695	1.2	128 200	1.1	18 175 509	1.0	83	2.8	2 326	2.5	38 082	2.3
Shelby -----	897	1.3	175 692	1.1	24 218 298	1.1	59	3.3	1 444	2.9	19 594	3.3
Sioux -----	1 473	1.2	237 825	1.0	32 900 770	1.0	310	1.4	11 635	.9	189 136	.8
Story -----	784	.9	151 920	.8	23 212 655	.8	41	3.1	1 398	2.1	27 338	2.2
Tama -----	971	1.1	174 699	1.0	24 071 148	1.0	87	2.6	2 734	3.3	38 859	3.8
Taylor -----	528	1.4	66 630	1.2	8 014 094	1.2	26	4.2	547	2.2	6 327	2.0
Union -----	437	1.5	49 369	1.4	6 143 927	1.4	32	4.2	730	3.3	8 975	3.0
Van Buren -----	463	3.1	44 565	2.8	5 768 183	2.8	65	5.0	1 034	5.2	13 811	5.1
Wapello -----	406	1.7	51 736	1.7	6 815 170	1.6	27	4.3	1 109	3.9	17 934	4.7
Warren -----	694	1.3	79 661	1.2	10 284 074	1.2	71	3.1	1 997	2.3	23 078	1.8
Washington -----	812	1.2	127 681	1.0	16 655 738	1.0	89	3.0	1 726	3.5	23 814	3.8
Wayne -----	435	1.4	52 001	1.2	6 003 312	1.2	44	3.8	1 386	8.1	16 988	6.9
Webster -----	883	1.0	181 453	.8	28 419 824	.8	26	4.2	967	7.1	18 130	6.6
Winnebago -----	530	1.2	121 575	1.1	17 000 885	1.1	44	4.1	1 064	3.6	20 197	3.5
Winneshiek -----	1 158	1.6	121 761	1.3	14 463 240	1.3	512	1.8	12 075	1.7	179 507	1.7
Woodbury -----	859	1.3	192 504	1.0	26 663 576	1.0	80	2.9	3 240	5.6	48 050	4.9
Worth -----	504	1.0	108 012	.9	14 258 316	.9	52	3.0	1 183	2.2	18 747	2.1
Wright -----	716	.7	167 733	.7	26 222 277	.6	13	4.4	320	1.9	5 680	2.2

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-29

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested —Con.											
	Wheat for grain								Oats for grain			
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Iowa -----	970	1.4	30 072	1.4	1 183 472	1.4	17 854	1.1	368 086	1.0	23 246 559	1.0
Adair -----	7	10.8	157	15.9	3 498	15.6	225	2.0	5 205	2.1	301 383	2.1
Adams -----	4	11.1	(D)	(D)	(D)	(D)	99	3.2	2 221	3.7	113 333	3.8
Allamakee -----	5	14.3	80	17.5	2 984	20.4	475	1.7	11 548	1.6	616 645	1.6
Appanoose -----	9	9.8	765	2.0	24 870	1.0	47	5.7	1 139	6.8	56 604	9.2
Audubon -----	2	15.1	(D)	(D)	(D)	(D)	173	2.0	3 579	2.1	267 379	2.2
Benton -----	5	12.7	108	14.3	5 177	20.3	314	1.6	6 192	1.9	385 668	2.0
Black Hawk -----	4	9.6	100	10.5	5 195	13.1	164	1.9	2 978	2.3	195 317	2.4
Boone -----	9	6.4	264	8.2	11 416	9.6	94	2.5	1 880	3.4	120 770	3.3
Bremer -----	2	14.5	(D)	(D)	(D)	(D)	240	1.9	4 205	2.1	288 626	2.1
Buchanan -----	2	13.3	(D)	(D)	(D)	(D)	293	1.7	4 780	1.8	318 318	1.8
Buena Vista -----	-	-	-	-	-	-	137	2.0	2 352	3.2	188 218	2.8
Butler -----	3	-	110	-	4 100	-	255	1.5	4 571	1.4	313 926	1.5
Calhoun -----	2	27.5	(D)	(D)	(D)	(D)	108	2.6	2 337	3.1	185 505	2.9
Carroll -----	2	-	(D)	(D)	(D)	(D)	284	1.7	4 933	2.0	408 920	2.0
Cass -----	6	11.5	141	14.8	4 690	14.8	159	2.2	2 846	2.4	161 654	2.4
Cedar -----	10	7.3	184	9.1	8 170	8.6	238	1.7	3 859	1.9	249 854	1.9
Cerro Gordo -----	1	-	(D)	(D)	(D)	(D)	126	2.2	2 473	2.6	171 401	2.4
Cherokee -----	2	19.7	(D)	(D)	(D)	(D)	138	2.3	2 239	2.4	195 340	2.4
Chickasaw -----	7	9.5	214	8.6	8 495	11.4	263	1.9	5 061	2.1	309 788	2.0
Clarke -----	3	19.8	25	19.2	(D)	(D)	106	2.5	2 932	2.5	115 244	2.5
Clay -----	1	26.9	(D)	(D)	(D)	(D)	46	3.4	1 052	2.4	81 046	2.5
Clayton -----	12	6.4	175	5.3	7 435	8.6	656	1.1	14 521	1.2	881 290	1.1
Clinton -----	11	7.2	231	4.4	8 740	6.3	326	1.8	5 229	2.1	306 125	2.2
Crawford -----	7	10.7	209	16.8	8 278	16.4	318	1.8	7 373	1.9	541 308	2.0
Dallas -----	8	8.8	223	9.1	10 362	9.2	58	3.5	1 210	4.4	77 140	4.1
Davis -----	32	5.9	937	5.1	35 489	4.1	109	4.8	1 776	4.6	79 201	4.7
Decatur -----	2	15.1	(D)	(D)	(D)	(D)	21	6.7	452	4.6	24 880	4.3
Delaware -----	5	10.6	157	10.9	7 235	11.5	502	1.4	10 952	1.5	664 701	1.5
Des Moines -----	40	4.5	1 112	5.1	51 010	4.9	49	3.9	909	3.9	40 532	3.9
Dickinson -----	6	13.1	148	18.1	8 280	17.8	51	3.7	1 122	3.7	92 038	4.0
Dubuque -----	16	6.6	298	8.1	12 138	8.5	741	1.5	16 766	1.4	917 340	1.4
Emmet -----	-	-	-	-	-	-	40	3.9	489	4.1	40 128	4.0
Fayette -----	4	13.4	34	15.4	980	18.7	491	1.5	10 446	1.7	661 640	1.6
Floyd -----	-	-	-	-	-	-	149	2.3	2 638	2.5	180 420	2.6
Franklin -----	3	9.9	(D)	(D)	(D)	(D)	121	2.5	2 403	3.0	189 891	3.4
Fremont -----	18	3.8	1 304	4.1	41 717	4.9	12	3.0	349	4.1	22 706	4.1
Greene -----	4	9.1	63	13.8	3 294	13.3	89	2.8	1 372	3.2	102 203	3.4
Grundy -----	4	15.1	(D)	(D)	1 173	17.0	138	2.0	2 193	2.5	164 046	2.1
Guthrie -----	4	-	185	-	4 350	-	171	2.0	3 347	2.3	191 294	2.3
Hamilton -----	1	-	(D)	(D)	(D)	(D)	64	3.4	1 018	3.6	74 972	4.0
Hancock -----	3	19.3	24	19.3	1 420	19.3	132	2.0	2 159	2.1	173 059	2.0
Hardin -----	-	-	-	-	-	-	87	2.3	1 511	2.7	107 508	2.9
Harrison -----	20	6.5	494	8.6	17 074	9.5	82	3.2	1 868	3.7	121 431	3.6
Henry -----	21	5.3	1 013	6.9	46 440	6.0	74	3.4	1 201	3.8	68 066	4.2
Howard -----	3	14.0	(D)	(D)	(D)	(D)	243	2.0	5 158	2.2	316 453	2.3
Humboldt -----	1	23.7	(D)	(D)	(D)	(D)	67	2.7	1 181	3.7	91 067	3.7
Ida -----	7	6.7	100	5.0	5 030	5.1	179	1.9	3 512	2.1	291 997	2.2
Iowa -----	7	8.1	97	8.4	3 511	8.7	259	1.8	6 159	1.8	338 214	2.0
Jackson -----	21	5.6	861	3.0	29 691	4.1	491	1.8	11 068	1.8	577 991	1.8
Jasper -----	7	9.5	199	11.6	5 900	11.3	313	1.5	7 042	1.8	447 956	1.7
Jefferson -----	48	3.8	1 744	6.6	50 461	3.5	113	2.8	2 366	2.7	106 731	3.1
Johnson -----	18	6.1	838	5.6	41 651	6.2	352	1.6	7 917	1.7	449 934	1.8
Jones -----	6	9.3	133	8.0	6 380	9.7	341	1.6	7 599	1.9	415 520	1.5
Keokuk -----	30	4.7	826	3.4	39 213	3.8	138	2.3	2 575	2.2	139 713	2.3
Kossuth -----	1	27.2	(D)	(D)	(D)	(D)	216	1.9	3 184	2.5	254 803	2.2
Lee -----	131	2.4	3 282	2.5	129 937	2.2	79	3.2	1 146	4.4	56 260	5.5
Linn -----	6	7.3	153	10.5	6 545	12.0	331	1.5	6 810	1.8	401 075	1.9
Louisa -----	18	6.0	606	7.0	27 881	9.1	55	3.8	725	4.3	37 971	4.3
Lucas -----	7	9.9	82	11.7	3 230	11.2	76	4.2	2 501	4.8	134 749	4.9
Lyon -----	3	11.4	65	5.3	(D)	(D)	247	2.1	4 689	2.2	375 054	2.2
Madison -----	2	18.8	(D)	(D)	(D)	(D)	114	2.2	2 078	2.5	124 046	2.4
Mahaska -----	4	14.7	91	18.3	(D)	(D)	222	1.9	3 902	2.2	227 887	2.3
Marion -----	7	9.5	254	12.0	8 495	12.3	162	2.3	3 250	2.4	188 947	2.4
Marshall -----	6	7.7	80	4.1	3 390	3.3	126	2.1	2 356	2.7	153 534	2.9
Mills -----	12	8.8	309	7.0	9 745	7.2	38	4.1	939	4.0	57 241	3.7
Mitchell -----	2	19.7	(D)	(D)	(D)	(D)	208	1.7	4 902	2.2	332 992	2.3
Monona -----	19	5.9	1 214	5.3	43 068	4.7	97	2.9	2 392	2.1	183 299	2.1
Monroe -----	8	7.5	346	5.7	19 105	5.7	46	3.9	1 279	2.4	60 446	2.8
Montgomery -----	5	5.4	383	.9	6 690	1.7	61	3.5	1 196	3.7	68 673	3.8
Muscatine -----	9	7.9	199	8.6	6 767	7.4	135	2.5	2 637	2.9	148 021	3.0
O'Brien -----	-	-	-	-	-	-	147	2.3	1 981	2.2	167 645	2.1
Oscceola -----	3	15.5	293	20.5	12 230	20.4	107	2.8	1 671	2.8	151 919	2.8
Page -----	28	4.6	906	4.1	22 892	3.6	82	2.9	1 874	3.2	104 535	3.3
Palo Alto -----	1	-	(D)	(D)	(D)	(D)	101	2.6	1 752	3.2	142 614	3.0
Plymouth -----	7	9.2	379	13.1	18 352	18.8	371	1.7	9 704	1.6	720 220	1.6
Pocahontas -----	-	-	-	-	-	-	82	2.6	1 414	3.4	112 033	3.4
Polk -----	3	-	81	-	2 675	-	63	3.3	1 035	2.9	63 054	2.7
Pottawattamie -----	14	7.2	287	7.7	9 927	6.5	176	2.3	4 069	2.4	280 524	2.5
Poweshiek -----	1	30.1	(D)	(D)	(D)	(D)	284	1.8	7 158	2.0	390 718	2.0

See footnotes at end of table.

C-30 APPENDIX C

1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested —Con.											
	Wheat for grain								Oats for grain			
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Ringgold -----	11	8.4	445	11.5	15 877	17.4	83	3.0	2 919	2.1	135 375	2.8
Sac -----	11	6.8	264	8.5	10 286	7.4	182	1.9	3 597	2.2	304 168	2.2
Scott -----	5	12.5	107	8.7	3 922	8.2	162	2.3	2 482	2.5	166 606	2.4
Shelby -----	2	17.2	(D)	(D)	(D)	(D)	298	1.7	6 128	2.0	452 754	2.0
Sioux -----	3	11.0	167	6.3	8 482	6.3	289	1.7	6 476	1.8	532 378	1.8
Story -----	9	6.2	167	4.4	11 323	2.8	68	3.0	901	3.2	48 203	3.0
Tama -----	4	15.2	153	17.1	6 498	18.3	249	1.9	4 545	1.9	251 471	2.0
Taylor -----	15	5.3	543	5.4	15 372	6.4	86	3.1	2 088	3.5	102 207	3.5
Union -----	3	17.4	96	18.0	4 132	17.4	122	2.6	3 395	3.5	188 747	3.0
Van Buren -----	73	5.1	1 510	6.0	65 243	6.6	98	4.6	1 612	4.7	68 263	5.1
Wapello -----	11	6.8	676	20.4	18 398	8.1	53	3.7	1 042	3.6	58 079	3.6
Warren -----	5	9.6	62	12.5	2 780	13.4	103	2.7	1 838	3.0	87 381	2.7
Washington -----	44	3.8	900	4.8	42 135	5.8	217	2.1	4 421	2.2	232 375	2.3
Wayne -----	6	9.1	580	5.1	33 820	2.6	58	3.3	1 579	3.8	64 174	4.2
Webster -----	5	11.9	27	13.4	1 026	13.0	96	2.6	2 085	3.3	133 138	3.5
Winnebago -----	1	—	(D)	(D)	(D)	(D)	85	3.0	1 220	5.0	87 876	3.2
Winneshiek -----	5	9.8	84	6.5	3 795	4.2	673	1.7	15 039	1.8	816 162	1.7
Woodbury -----	5	10.7	375	2.6	10 040	3.4	176	2.2	5 415	2.5	461 645	2.6
Worth -----	—	—	—	—	—	—	119	2.2	1 733	3.1	122 622	3.0
Wright -----	—	—	—	—	—	—	50	3.1	664	3.7	52 241	3.4
Geographic area	Selected crops harvested —Con.											
	Soybeans for beans								Hay —alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)			
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)
Iowa -----	59 945	1.1	8 243 067	.8	352 590 997	.8	44 768	1.1	1 762 425	1.1	5 107 237	1.1
Adair -----	580	1.4	65 152	1.2	2 643 985	1.2	578	1.4	32 256	1.4	100 424	1.4
Adams -----	388	1.6	42 275	1.6	1 662 940	1.6	405	1.6	20 921	2.1	51 485	2.0
Allamakee -----	115	2.8	4 327	3.0	162 674	2.9	745	1.5	54 540	1.4	171 742	1.4
Appanoose -----	337	3.4	24 881	3.0	910 574	2.9	614	2.9	42 066	3.4	92 669	3.4
Audubon -----	521	1.3	73 681	1.1	3 238 961	1.0	354	1.5	12 347	1.9	38 705	1.8
Benton -----	941	1.1	135 331	1.0	5 835 440	1.0	585	1.3	19 191	1.7	59 184	1.6
Black Hawk -----	733	.9	94 301	.8	4 231 089	.8	376	1.3	8 577	1.7	20 480	2.0
Boone -----	667	1.0	126 604	.9	5 622 987	.8	328	1.4	6 579	1.8	17 766	2.3
Bremer -----	688	1.3	59 245	1.3	2 694 201	1.3	468	1.5	13 908	1.8	40 286	1.9
Buchanan -----	776	1.2	79 520	1.0	3 486 801	1.0	526	1.4	14 789	1.6	39 252	1.8
Buena Vista -----	789	.9	133 787	.8	6 060 492	.8	243	1.5	4 935	2.6	15 549	2.2
Butler -----	773	.9	88 938	.9	3 984 848	.9	434	1.2	10 721	1.5	28 472	1.5
Calhoun -----	743	1.1	145 174	1.0	6 444 799	1.0	213	1.9	4 213	3.5	12 105	2.8
Carroll -----	932	1.1	122 952	1.0	5 511 668	1.0	487	1.4	13 976	1.2	48 903	1.2
Cass -----	652	1.2	89 909	1.1	3 706 504	1.1	504	1.3	21 545	1.4	63 361	1.3
Cedar -----	746	1.1	83 827	1.1	3 682 418	1.1	504	1.3	13 924	1.5	44 909	1.6
Cerro Gordo -----	609	1.0	97 497	1.0	4 003 973	1.0	201	1.8	4 690	1.9	11 580	2.3
Cherokee -----	784	1.1	108 195	1.0	4 915 902	1.0	381	1.4	10 179	1.5	32 848	1.6
Chickasaw -----	628	1.4	66 195	1.2	2 702 009	1.1	472	1.5	14 891	1.9	39 810	1.9
Clarke -----	301	1.6	22 815	1.4	796 250	1.4	477	1.4	31 549	1.4	76 672	1.4
Clay -----	623	1.0	121 194	.9	5 232 764	.9	247	1.7	4 806	1.8	14 490	1.8
Clayton -----	211	1.8	17 427	2.1	758 889	2.1	1 153	.9	69 924	1.0	229 879	1.1
Clinton -----	796	1.3	76 478	1.2	3 463 361	1.3	643	1.4	18 956	1.7	62 055	1.8
Crawford -----	836	1.4	101 847	1.2	4 346 150	1.2	680	1.5	22 381	1.7	71 769	1.8
Dallas -----	608	1.2	106 710	1.0	4 564 019	1.0	376	1.4	10 108	2.0	27 974	2.9
Davis -----	332	3.4	27 567	2.6	1 112 304	2.6	671	3.0	41 289	3.1	98 689	3.0
Decatur -----	235	1.9	21 608	1.8	729 106	1.9	445	1.4	35 511	1.4	78 702	1.4
Delaware -----	469	1.4	28 857	1.5	1 266 958	1.4	854	1.2	40 829	1.3	127 794	1.4
Des Moines -----	455	1.3	58 167	1.2	2 572 017	1.2	304	1.5	8 516	1.4	24 703	1.9
Dickinson -----	409	1.2	73 268	1.1	2 919 157	1.1	190	1.9	6 686	1.8	20 529	1.7
Dubuque -----	130	2.3	5 817	2.1	228 774	2.1	1 200	1.3	73 580	1.2	258 710	1.3
Emmet -----	435	1.1	85 631	1.0	3 590 459	1.0	149	2.0	3 417	2.6	9 145	2.8
Fayette -----	713	1.3	71 972	1.2	3 009 908	1.3	739	1.3	34 176	1.4	110 947	1.5
Floyd -----	638	1.2	92 524	1.2	3 841 602	1.2	310	1.7	6 563	2.0	17 298	2.5
Franklin -----	730	1.2	115 613	1.1	4 990 597	1.0	252	1.8	6 915	2.7	19 066	3.1
Fremont -----	466	1.1	107 307	.8	4 517 695	.8	201	1.8	5 766	1.6	17 221	1.7
Greene -----	697	1.0	145 964	.8	6 742 552	.8	252	1.6	5 717	1.5	16 614	1.5
Grundy -----	678	.9	116 583	.8	5 501 079	.8	263	1.5	5 733	1.8	17 068	2.0
Guthrie -----	587	1.3	77 719	1.2	3 201 502	1.2	486	1.4	20 026	1.6	53 318	1.5
Hamilton -----	695	.9	131 490	.8	6 051 647	.8	164	1.9	2 324	2.5	5 793	2.9
Hancock -----	742	1.0	113 878	1.0	4 586 171	1.0	229	1.7	5 083	3.1	14 903	2.9
Hardin -----	712	.9	108 001	.8	4 924 807	.8	293	1.5	5 326	1.6	15 342	2.0
Harrison -----	673	1.3	121 278	1.1	5 291 972	1.1	388	1.7	11 462	1.9	33 506	1.8
Henry -----	481	1.4	58 009	1.3	2 587 985	1.3	368	1.6	9 888	2.1	26 545	2.3
Howard -----	544	1.5	66 955	1.3	2 223 899	1.3	405	1.6	14 833	1.7	42 997	1.8
Humboldt -----	573	.9	112 373	.8	5 104 867	.8	139	1.9	3 031	2.1	8 364	2.3
Ida -----	561	1.4	80 300	1.2	3 480 110	1.2	347	1.6	10 393	1.6	37 077	1.8
Iowa -----	575	1.2	50 270	1.0	1 974 300	1.1	578	1.3	25 048	1.2	70 457	1.3
Jackson -----	193	2.2	8 890	2.5	361 996	2.5	900	1.5	50 651	1.6	159 170	1.7

See footnotes at end of table.

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Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested —Con.											
	Soybeans for beans						Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)
Jasper -----	845	1.1	104 081	.9	4 646 848	.9	734	1.1	25 565	1.3	75 241	1.4
Jefferson -----	438	1.6	52 899	1.4	2 231 406	1.4	414	1.6	18 194	1.8	45 079	2.0
Johnson -----	634	1.3	57 227	1.3	2 318 277	1.2	698	1.3	25 554	1.4	75 427	1.5
Jones -----	514	1.4	45 045	1.3	1 902 785	1.3	652	1.2	26 799	1.3	86 684	1.3
Keokuk -----	592	1.3	61 882	1.2	2 508 961	1.2	455	1.5	18 708	1.6	51 507	1.7
Kossuth -----	1 329	1.0	226 397	.9	9 445 398	.9	376	1.6	7 408	2.0	22 093	2.0
Lee -----	537	1.3	60 541	1.2	2 644 265	1.2	485	1.4	18 918	2.5	49 966	2.0
Linn -----	817	1.1	89 318	.9	3 755 015	1.0	774	1.1	22 965	1.3	61 308	1.3
Louisa -----	396	1.3	55 621	1.2	2 358 933	1.3	219	1.8	5 691	3.5	16 604	3.3
Lucas -----	233	3.0	18 711	2.8	702 313	2.8	452	2.6	28 708	2.7	66 259	2.7
Lyon -----	882	1.6	112 706	1.5	4 481 809	1.4	534	1.7	13 329	1.7	46 086	1.7
Madison -----	556	1.3	54 995	1.1	2 329 063	1.1	627	1.2	26 972	1.3	77 089	1.3
Mahaska -----	700	1.2	78 645	1.1	3 312 531	1.1	531	1.4	17 376	1.6	52 221	1.7
Marion -----	582	1.5	58 986	1.4	2 470 255	1.4	545	1.5	22 145	1.6	60 300	1.7
Marshall -----	624	1.0	83 474	.9	3 862 406	.9	416	1.2	11 109	1.4	30 862	1.5
Mills -----	410	1.3	84 285	1.1	3 590 627	1.1	221	1.9	5 680	1.9	15 154	2.3
Mitchell -----	563	1.1	75 467	1.0	2 986 614	1.0	296	1.6	8 452	1.7	23 226	1.8
Monona -----	563	1.4	110 765	1.0	4 751 636	1.0	279	1.9	10 210	1.9	32 491	1.7
Monroe -----	255	1.9	15 675	2.1	547 125	2.2	495	1.5	29 977	1.5	77 319	1.6
Montgomery -----	456	1.3	71 154	1.2	2 991 085	1.3	322	1.5	11 970	1.9	35 382	2.2
Muscatine -----	487	1.3	56 839	1.2	2 305 151	1.2	359	1.5	11 130	1.9	34 083	1.8
O'Brien -----	935	1.2	145 046	1.1	6 237 170	1.0	353	1.6	5 967	1.8	19 746	1.9
Osceola -----	621	1.5	107 196	1.3	4 210 212	1.3	247	2.0	4 493	2.5	14 436	2.8
Page -----	672	1.2	89 871	1.2	3 778 184	1.2	505	1.4	17 183	1.6	44 516	1.6
Palo Alto -----	694	1.1	129 639	1.0	5 611 434	1.0	206	1.9	3 949	2.2	11 149	2.1
Plymouth -----	1 123	1.3	151 940	1.1	6 697 405	1.1	650	1.4	16 324	1.3	60 506	1.4
Pocahontas -----	818	1.0	152 808	.9	6 644 547	.9	176	2.0	3 032	2.9	8 486	2.5
Polk -----	487	1.4	81 765	1.1	3 571 654	1.1	283	1.9	6 748	2.2	19 504	2.6
Pottawattamie -----	1 016	1.3	168 779	1.0	7 317 541	1.0	656	1.4	18 754	1.5	58 993	1.5
Poweshiek -----	622	1.4	78 149	1.2	3 270 771	1.2	589	1.4	26 990	1.4	85 405	1.5
Ringgold -----	356	1.6	33 620	1.4	1 201 579	1.3	464	1.5	36 511	1.5	92 935	1.5
Sac -----	762	1.2	126 791	1.0	5 586 906	1.0	349	1.6	9 973	1.5	32 159	1.8
Scott -----	562	1.3	50 011	1.2	2 304 683	1.2	398	1.5	9 461	1.7	30 751	2.0
Shelby -----	806	1.3	95 989	1.2	4 131 874	1.2	491	1.4	14 662	1.6	50 286	1.6
Sioux -----	1 287	1.3	148 868	1.2	6 583 633	1.2	645	1.3	16 503	1.4	61 828	1.5
Story -----	737	.9	125 600	.8	5 723 470	.8	300	1.5	6 382	2.2	16 971	2.1
Tama -----	840	1.2	100 454	1.1	4 257 560	1.1	644	1.3	19 964	1.4	57 684	1.5
Taylor -----	464	1.5	51 422	1.3	1 917 682	1.3	428	1.5	23 075	1.7	55 763	1.8
Union -----	363	1.6	33 191	1.5	1 270 116	1.6	438	1.5	25 851	1.5	71 746	1.6
Van Buren -----	381	3.2	36 824	2.9	1 511 190	2.9	489	3.0	24 723	3.0	56 798	3.2
Wapello -----	339	1.8	42 352	1.7	1 721 757	1.7	435	1.6	17 645	1.9	37 947	2.1
Warren -----	593	1.4	56 485	1.4	2 275 847	1.3	726	1.3	29 547	1.5	81 734	1.6
Washington -----	705	1.2	77 777	1.1	3 390 420	1.1	495	1.5	17 016	1.6	47 238	1.7
Wayne -----	355	1.5	37 444	1.4	1 294 169	1.4	506	1.3	37 879	1.5	87 450	1.6
Webster -----	863	1.0	173 398	.9	7 663 843	.8	219	1.8	3 417	2.4	10 370	2.8
Winnebago -----	449	1.3	71 897	1.2	2 794 128	1.1	149	2.2	2 977	3.2	7 828	3.7
Winneshiek -----	348	1.9	17 569	1.9	609 512	1.8	1 081	1.6	62 309	1.5	192 850	1.6
Woodbury -----	690	1.4	97 748	1.2	4 243 826	1.2	457	1.5	13 051	1.6	42 452	1.6
Worth -----	464	1.0	73 918	.9	2 875 019	.9	237	1.6	4 300	2.0	12 723	2.8
Wright -----	680	.8	143 500	.7	6 277 200	.7	147	1.9	2 144	2.6	6 275	2.9

¹Data are based on a sample of farms.

Table G. State Estimates of the Not on the Mail List Component of Farm Coverage Error: 1992

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text]

Item	Census published farms		Not on mail list ¹		Percent not on mail list ¹	
	Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent)	Total (percent)	Standard error of percent
Farms ----- number	96 543	1.1	6 338	19.7	6.2	1.2
Land in farms ----- acres	31 346 565	.9	286 307	22.6	.9	.2
Average size of farm ----- acres	324.7	.3	45.2	21.7	(X)	(X)
Farms by size:						
Less than 10 acres -----	7 129	1.2	1 791	31.4	20.1	5.1
10 to 49 acres -----	10 345	1.2	3 225	27.0	23.8	4.9
Less than 50 acres -----	17 474	1.2	5 016	22.8	22.3	4.0
50 acres or more -----	79 069	1.1	1 322	29.8	1.6	.5
50 to 99 acres -----	9 008	1.2	674	44.6	7.0	2.9
100 to 179 acres -----	15 510	1.3	242	61.0	1.5	.9
180 acres or more -----	54 551	1.1	406	51.0	.7	.4
Harvested cropland ----- farms	84 009	1.1	3 022	27.3	3.5	.9
acres	22 826 308	.8	182 051	30.5	.8	.2
Farms by value of sales:						
Less than \$1,000 -----	3 463	1.4	1 212	42.5	25.9	8.2
\$1,000 to \$2,499 -----	4 173	1.5	2 372	32.5	36.2	7.5
Less than \$2,500 -----	7 636	1.4	3 584	27.0	31.9	5.8
\$2,500 or more -----	88 907	1.1	2 754	23.4	3.0	.7
\$2,500 to \$9,999 -----	11 783	1.3	824	42.7	6.5	2.6
\$10,000 or more -----	77 124	1.1	1 931	28.2	2.4	.7
Market value of agricultural products sold --- \$1,000 --	10 099 786	.6	107 716	30.2	1.1	.3
Farms by standard industrial classification:						
Crops (01) -----	51 010	1.1	1 884	30.2	3.6	1.1
Livestock (02) -----	45 533	1.1	4 451	21.0	8.9	1.7
Farms by type of organization:						
Individual or family -----	81 127	1.1	5 629	21.2	6.5	1.3
Partnership or corporation -----	14 952	1.0	710	41.1	4.5	1.8
Other -----	464	1.7	-	(X)	-	(X)
Farms by tenure of operator:						
Full owners -----	43 541	1.1	4 970	21.4	10.2	2.0
Part owners and tenants -----	53 002	1.1	1 369	30.8	2.5	.8
Part owners -----	34 720	1.0	303	52.9	.9	.5
Tenants -----	18 282	1.2	1 066	37.0	5.5	1.9
Operators by place of residence:						
On farm operated -----	72 150	1.1	4 538	21.9	5.9	1.2
Not on farm operated -----	19 053	1.2	1 433	33.3	7.0	2.2
Not reported -----	5 340	1.0	367	62.3	6.4	3.8
Operators by principal occupation:						
Farming -----	66 885	1.1	1 739	30.6	2.5	.8
Other -----	29 658	1.2	4 590	24.6	13.4	2.9
Operators by sex:						
Male -----	92 730	1.1	5 381	20.9	5.5	1.1
Female -----	3 813	1.2	957	49.5	20.1	7.9
Operators by race:						
White -----	96 456	1.1	6 330	19.7	6.2	1.2
Black and other races -----	87	3.3	-	(X)	-	(X)
Operators by years on present farm:						
4 years or less -----	10 335	1.5	3 107	30.2	23.1	5.4
5 years or more -----	73 491	1.1	2 114	29.5	2.8	.8
Average years on present farm -----	20.8	1.5	6.8	33.4	(X)	(X)
Not reported -----	12 717	1.1	1 117	41.1	8.1	3.1
Average age of operator -----	50.3	.1	41.4	17.8	(X)	(X)

NOTE: These estimates do not account for incorrectly classified farms or farms appearing more than once in the census and are subject to change in the 1992 Coverage Evaluation publication. See appendix C text for further explanation.

¹Estimates are based on a sample survey conducted independently of census data collection.